STATE COLLEGE RECORD

GASTON TECHNICAL INSTITUTE

GASTONIA, N. C.

A DIVISION OF
NORTH CAROLINA STATE COLLEGE
SCHOOL OF ENGINEERING
OPERATED BY COLLEGE EXTENSION DIVISION
RALEIGH, N. C.

1962-63
CATALOG AND
BULLETIN

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Gaston Technical Institute

Gastonia, North Carolina

A Division of North Carolina State College

The School of Engineering

Raleigh, North Carolina

Catalog and Bulletin

1962-1963

Operated by

COLLEGE EXTENSION DIVISION
NORTH CAROLINA STATE COLLEGE

- address -

GASTON TECHNICAL INSTITUTE
1025 WEST FRANKLIN AVENUE
GASTONIA, NORTH CAROLINA

TELEPHONE 864-5711 AREA CODE 704

Choice of Technical School or College

Educational and training institutions vary widely as to the nature of their programs, objectives, courses, and organizations. It is advisable and appropriate for a prospective student to make his own evaluation of each school or college in terms of the student's own particular interests and needs.

Questions for Evaluation of Technical School or College

1. Is the institution or the curriculum accredited by a nationally recognized accrediting agency?

   The Gaston Technical Institute offers four "engineering technician" or "technical institute" curricula, each of which is accredited by the Engineers' Council for Professional Development. The programs of study in Civil Technology, Electrical Technology, Electronics Technology, and Mechanical & Production Technology, offered at GTI, are the only accredited engineering technician curricula available in the Carolinas.

2. Is the institution public, private or proprietary?

   Gaston Tech is a public, tax-supported, state institution, established and supported by and for the citizens of North Carolina.

3. Is the institution recognized as a unit of higher education, of vocational education, or of secondary education?

   GTI is a division of the School of Engineering of North Carolina State College in Raleigh, and is operated by the College Extension Division of State College on a separate campus in Gastonia, North Carolina. As a part of State College, Gaston Tech is an integral part of the Consolidated University of North Carolina under the supervision and control of the North Carolina State Board of Higher Education.

   The Gaston Technical Institute is separately listed as an institution of higher education in the Education Directory, Part 3, Higher Education, published by the Office of Education, U. S. Department of Health, Education, and Welfare, Washington, D. C.

4. What kind of certificate or diploma is awarded to the student upon graduation?

   Graduates of Gaston Technical Institute receive an Associate in Applied Science degree in the selected area of engineering technology.

5. Have a significant number of students been enrolled at this institution in the specific course of study or curriculum in which you are interested? Have they graduated? Have they found employment in a category consistent with the stated objectives and purposes of the institutional program?

   Gaston Tech has an organized placement service and a recognized and active alumni association. Graduates are offered a wide selection of employment opportunities in positions clearly identified with the engineering associate or engineering technician category.

6. Does the institution offer opportunities for full student development through extra-curricular activities?

   The GTI Student Council and class officers stimulate active participation of the student body in such extra-curricular activities as the physical education program, the highly organized and extensive intramural sports program, the student publications such as the college annual, "Tech Paths," and the student newspaper, "Technical Reporter," and the student clubs and societies such as the Collegiate Civitan Club, the Student Chapter of the American Society of Tool and Manufacturing Engineers, the Amateur Radio Club, the Student Associate Branch of the Institute of Radio Engineers, and the Associate Engineers Club.

7. Does the institution operate on a standard academic calendar system?

   The programs of study at the Gaston Technical Institute, previously offered on a semester basis, are now offered on a quarterly basis with the nine-month academic year from September through May divided into three "quarters" of study. An additional regular quarter is offered during the summer months for those students who either prefer to continue with a full program of study or wish to schedule remedial or make-up courses. Two academic years, or six quarters, are required for completion of the course requirements for graduation.

8. Is the faculty adequate and competent at the level of instruction and in the particular areas of instruction indicated by the official publications of the institution?

   Members of the faculty at Gaston Tech have been prepared academically with at least a bachelor's degree and in many cases with a master's degree in the appropriate area of instruction. Instructors of engineering technology subjects have been prepared in the appropriate area of engineering as distinguished from other technical or scientific areas of preparation. In addition, instructors maintain a close association with engineering, scientific, and professional societies, and endeavor to develop an orientation toward the profession of engineering on the part of the student.

9. Are the physical facilities and laboratory equipment adequate for the type and level of instruction indicated? Are they used for this purpose in regular, continuous, and organized courses?

   The accreditation of the engineering curricula at GTI followed a comprehensive study of the adequacy and competency of the faculty and administration, and also the adequacy and appropriateness of the physical facilities and laboratory equipment. Modern laboratory equipment and procedures provide an emphasis on sophisticated instrumentation methods and techniques.

10. Are the admission requirements consistent with the stated level and purpose of the institution or programs?

    An applicant for admission at the Gaston Technical Institute must be a graduate of an accredited high school or the equivalent. It is strongly recommended that a student have the equivalent of one and one-half units of high school algebra and one unit of high school plane geometry. A series of entrance examinations is used in conjunction with the high school transcript for guidance and counseling purposes.

11. Are all costs, direct and indirect, clearly spelled out in the official publication of the institution?

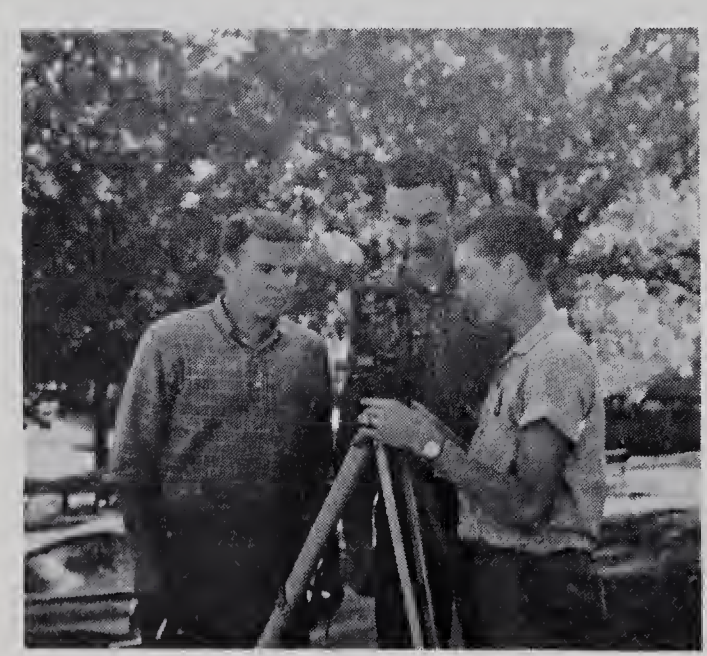
    The GTI catalog explains in detail all charges and expenses which the student must anticipate. The total cost to the student involves expenses for tuition, fees, books and supplies, room and board.

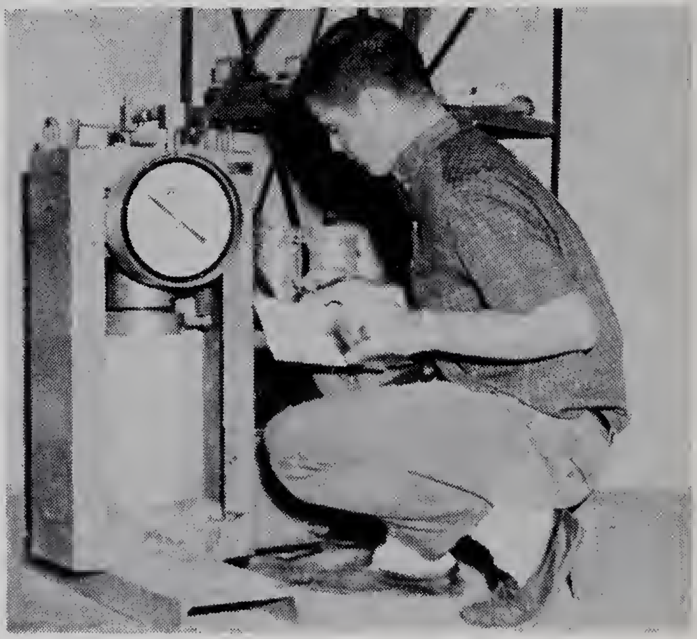
12. Is scholarship aid or loan fund assistance available to students?

    A limited amount of such assistance is presently available to students at Gaston Tech. Additional information may be obtained from the catalog or by inquiry to the Registrar.

13. Is a particular program of study at a particular institute the best one for you in terms of your own interests, aptitudes, available time, and available financial resources?

    The programs of study at the Gaston Technical Institute in Gastonia, North Carolina, are exclusively concerned with engineering technology. For this reason they are appropriate and desirable only for those students having the interests, aptitudes, and motivation for this area of study and employment. For many students these programs have been the best possible answer. Is this the best answer for your educational needs?





The Engineering Technician

American industry has made technical progress and has reached its high level of production more through engineering teamwork than through individual effort.

Technical manpower is often classified according to the following categories:

Engineer
Engineering Technician
Technical Specialist or Industrial Technician
Skilled Craftsman
Semi-skilled Machine Operator

These classifications indicate different categories of industrial employment and correspondingly different categories of required educational preparation. These different categories require different relative amounts of manipulative skills (know-how) and mental skills (know-why).

The semi-skilled machine operator requires almost 100% know-how and very little know-why, whereas the engineer requires very little know-how and almost 100% know-why.

The engineering technician refers to that category of supporting personnel which is most closely associated with and related to the profession of engineering, both in employment and in education. The engineering technician, sometimes referred to as an engineering associate or engineering aide, requires a significant amount of manipulative skills (know-how) but is primarily concerned with the application of mental skills (know-why) for which the best preparation is collegiate-level instruction in mathematics, the physical sciences, communication, appropriate technical skills, and appropriate technical specialties.

It has been recommended that programs of the type offered at GTI be designated *engineering technology programs* or *engineering technology curricula* since they are intended to educate students for work in engineering technology.

The term "engineering technology" is considered here as applying to that portion of the occupational area between the craftsman and the engineer which is *closest* to engineering. Once "engineering technology" has thus been defined, the "engineering technology curriculum" and the "engineering technician" may then be defined by reference.

> "Engineering technology is that *part* of the scientific and engineering field which requires the application of scientific and engineering methods combined with the technical skills *in support of* engineering activities."
>
> "An engineering technology curriculum is a planned sequence of organized courses designed to prepare students to work in the field of engineering technology. The curriculum is a collegiate-level curriculum often leading to the associate degree."
>
> "An engineering technician is one whose education and experience qualify him to work in the field of engineering technology."

Success Factors for Engineering Technicians

The nature of the engineering technology curriculum is such that it requires:

1. As a prerequisite, high school graduation with acceptable standing in subjects related to the post-secondary curriculum.
2. Thorough and rigorous training in scientific principles and technological practices.
3. Sufficient laboratory experience to enable the student to perform his duties satisfactorily upon employment.
4. Sufficient non-technical education to enable the student to develop his ability to supervise technicians, draftsmen, and skilled craftsmen; to make clear and concise reports to management and to make a positive contribution to society.

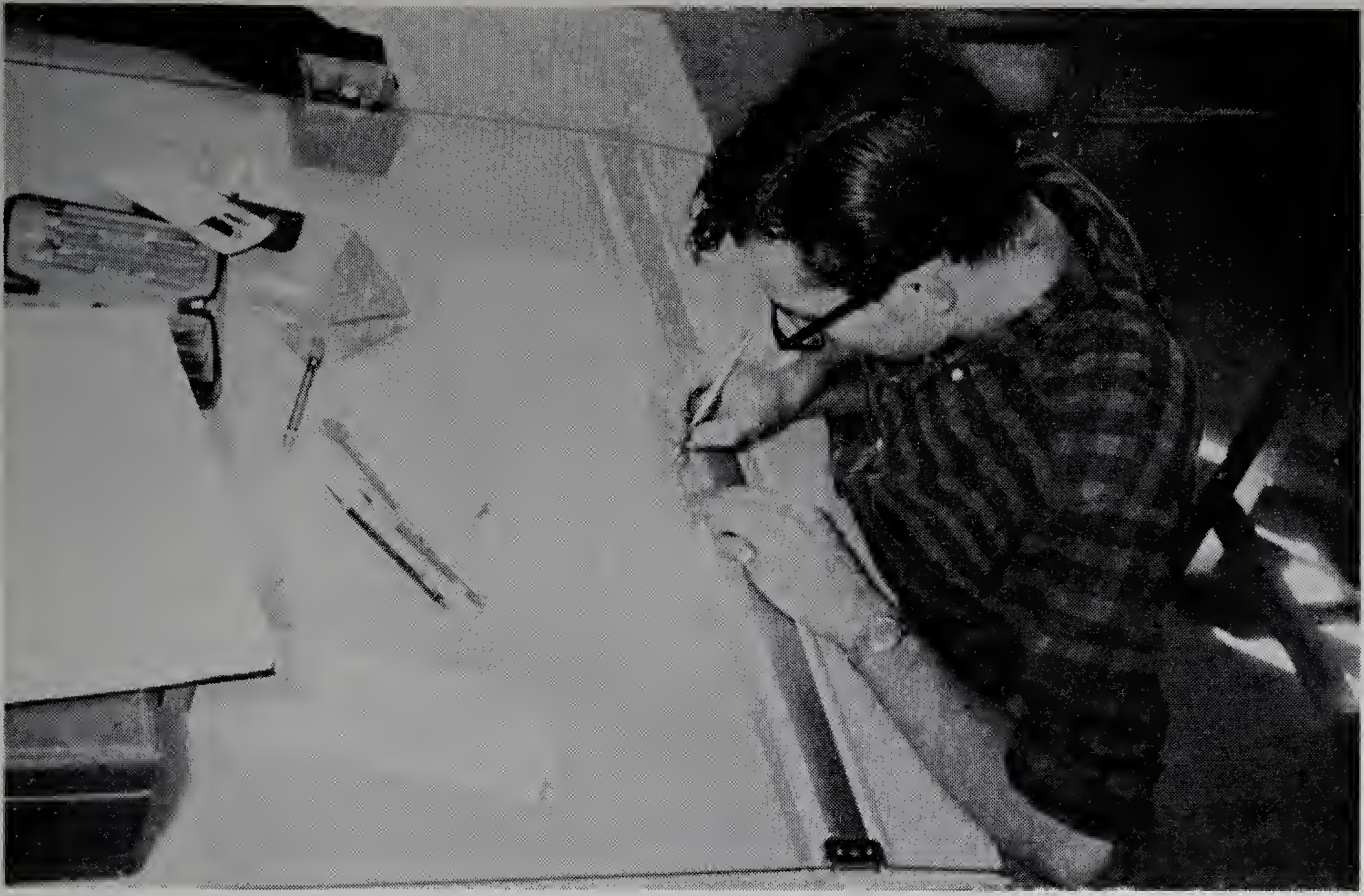
The Engineering Technology Curriculum

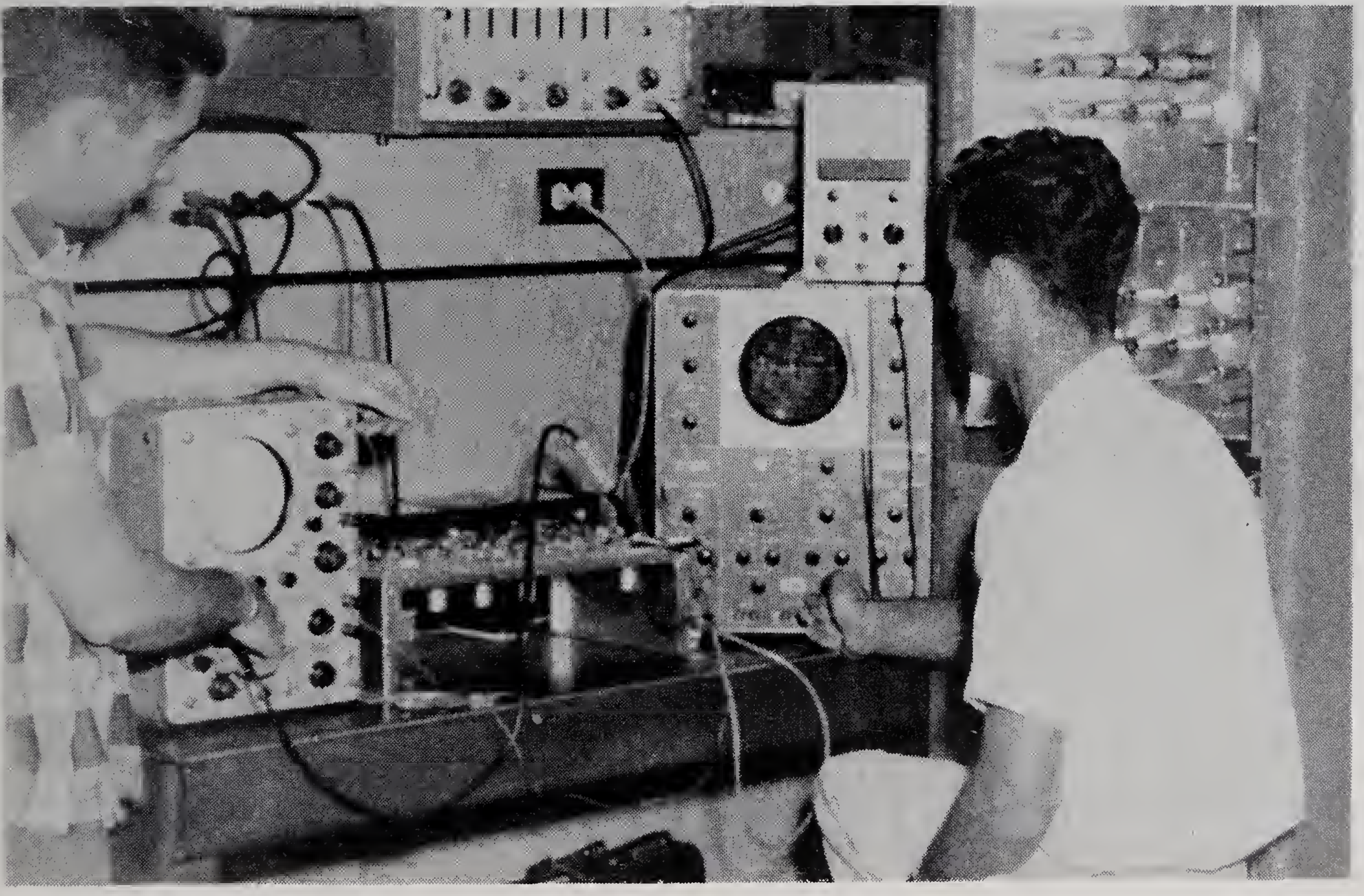
The engineering technology curriculum is a collegiate-level curriculum of at least two years duration and is "terminal" in the sense that it is especially designed for those students who plan to enter employment immediately upon graduation rather than to continue with additional formal education. Of course the educational process is actually never concluded and the student is advised and urged to continue his education by means of every possible opportunity.

Every curriculum must have a specific purpose and a specific objective with the consequence that the individual courses making up the curriculum must be selected and designed with the specific over-all purpose and objective in view.

The engineering technology curriculum is designed to prepare the student for immediate employment upon graduation as an engineering technician and is thus significantly different in content from a two-year pre-engineering collegiate program which anticipates two additional years of work toward the "terminal" objective of the bachelor's degree.

The engineering technology curriculum must provide collegiate-level courses in mathematics, physical sciences, communications, humanistic-social studies, industrial organization and management, technical skills, and technical specialties.





Gaston Technical Institute

Gastonia, North Carolina

GENERAL INFORMATION

Foreword

The Gaston Technical Institute was established in 1952. The industrial and business men of Gaston County donated $50,000 toward the purchase of a suitable location. The money was used to buy the Todd residence at 410 West Airline Avenue, Gastonia, and to construct a laboratory building on the rear of the lot.

A deed dated October 2, 1956 was presented by Mr. Harold Mercer, Vice-President and General Manager of Firestone Textiles, to Mr. C. C. Dawson, Chairman of the Citizens Advisory Board of the Gaston Technical Institute. The deed conveyed three large brick buildings at 1025 West Franklin Avenue to the Consolidated University of North Carolina.

The facilities on Airline Avenue were sold and the new facilities on Franklin Avenue were completely renovated prior to occupancy during the summer of 1958. The new facilities were formally dedicated in ceremonies on November 7, 1958.

Beginning with the 1957-58 academic year, the Gaston Technical Institute became a fully state-supported public institution of higher education, operated as a division of the School of Engineering of North Carolina State College by the College Extension Division.

Two-year collegiate programs of study are offered in four fields of engineering technology: Civil Technology, Electrical Technology, Electronics Technology, and Mechanical & Production Technology.

The graduate is awarded an Associate in Applied Science degree.

All four of these technical institute curricula were accredited in 1961 by the Engineers' Council for Professional Development.

Purpose

The purpose of the Gaston Technical Institute is to provide a collegiate atmosphere for the education of engineering technicians through specially designed post-high-school technical programs. The emphasis is upon total academic and personal development through a coordinated program of full-time activity. Responsible citizenship and professional planning are equal goals.

Buildings and Facilities

The three buildings, consisting of the East Wing, the Administration Building, and the West Wing, provide a working area of over 42,000 square feet. The engineering library and reading rooms are located upstairs in the West Wing. The placement library and placement interview rooms are located upstairs in the East Wing. The auditorium, dining room, and bookstore are located in the Administration Building.

The three buildings provide modern laboratory facilities for drawing, physics, metal working shop, welding, electrical circuits and machines, electronics, communications, and materials testing.

The Gastonia Young Men's Christian Association is located only four blocks away. The YMCA does not provide dormitory facilities. All GTI students receive membership in the YMCA.

CITIZENS ADVISORY BOARD

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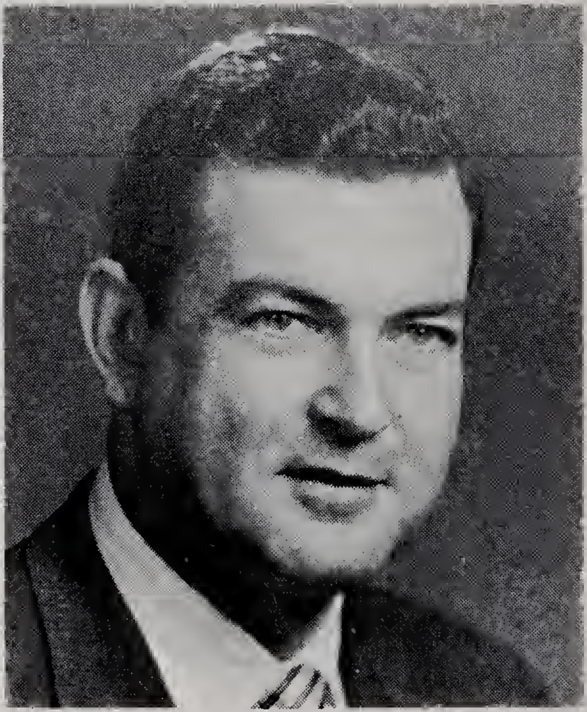
Gastonia, N. C.



W. Robert Holstead, Director
Gaston Technical Institute
Gastonia, N. C.

OFFICERS OF ADMINISTRATION

W. C. Friday, B.S., North Carolina State College; L.L.B., University of North Carolina; President, Consloidated University of North Carolina

John T. Caldwell, B.S., Mississippi State College; M.A., Duke University; M.A., Columbia University; Ph.D., Princeton University; Chancellor, North Carolina State College

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R. G. Carson, Jr., B.S., Clemson College; M.S., Georgia Institute of Technology; Ph.D., University of Michigan; Director of Instruction, School of Engineering, North Carolina State College

J. G. Vann, Business Manager, North Carolina State College

E. W. Ruggles, B.S., M.S., North Carolina State College; Director, College Extension Division, North Carolina State College

ADMINISTRATION

W. Robert Halstead, B.E.E., Georgia Tech; P.E. (Georgia); Director, Gaston Technical Institute

Paul V. Smith, A.B., Lenoir-Rhyne College; M.Ed., University of North Carolina; Registrar and Assistant to the Director

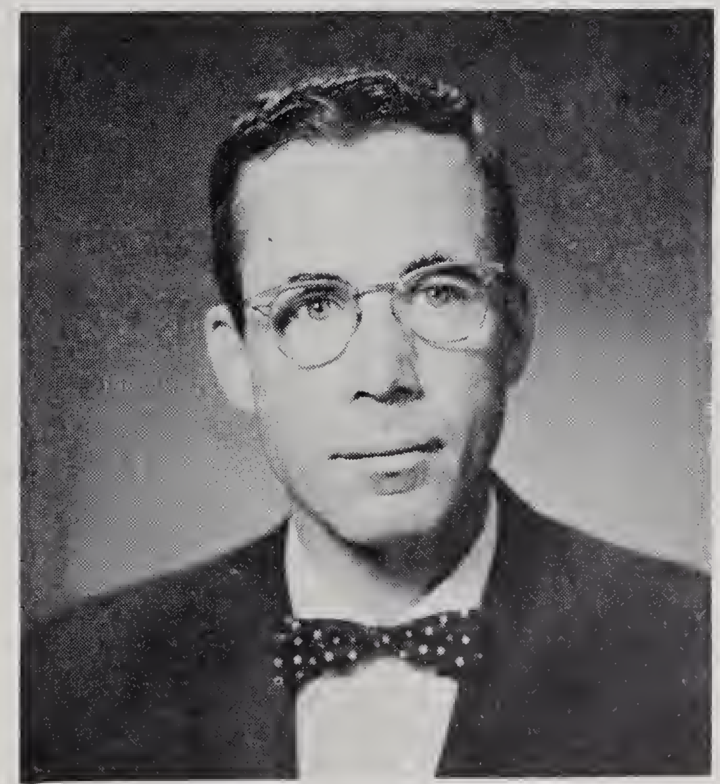
Mary E. McQuere, Administrative Assistant

Viola S. Brown, Bookkeeper

Thomas Blaine Carpenter, Dining Room Supervisor

Edward A. Jackson, Maintenance Supervisor

E. W. Ruggles, Director
College Extension Division
Raleigh, N. C.



Ralph E. Fadum, Dean
School of Engineering
Raleigh, N. C.

An applicant will be considered for acceptance if he or she is a graduate of an accredited high school, or the equivalent, and is recommended by the high school principal or guidance counselor as having a good moral character.

Since mathematics is of such great importance in present-day technical curricula, it is strongly recommended that a student have the equivalent of one and one-half units of high school algebra and one unit of high school plane geometry. Students presenting only one unit or less of algebra, or no plane geometry, are advised to take special non-credit courses to meet these deficiencies. All deficiencies in mathematics may be removed by attending the summer quarter prior to regular enrollment, or by correspondence. It is wise for the student to make every effort to complete the recommended courses in mathematics in high school before application for enrollment, or to take them in summer school or by correspondence prior to entering as a freshman in the fall.

Entrance Examinations

All students are requested to take a series of entrance examinations for guidance and counseling purposes prior to enrollment. These tests, the College Ability Test and the Cooperative Algebra Test, are widely used standard tests prepared by the Educational Testing Service. The tests are administered to applicants at the Gaston Technical Institute on scheduled examination dates, usually on a Saturday morning. Information concerning these scheduled examination dates may be obtained from the Registrar.

Results of these entrance examinations are used in conjunction with the high school record as a prediction factor for success in individual freshman courses and are not used to determine admissibility. A student may be advised to schedule remedial non-credit courses before undertaking the regular credit courses.

Admission by Transfer Credits

All students who transfer to the Gaston Technical Institute from other colleges must present official transcripts of work taken at the other institutions. A complete, separate, official transcript must be sent directly to the Registrar from each institution attended. The prospective transfer student must be eligible to return to the institution last attended. The student's record, if of average grade or above, will be evaluated by the Registrar. A transcript evaluation fee of $2 is charged for this service. Evaluation will be final. Failure of the student to present transcripts from all colleges previously attended may result in his dismissal.

Admission as an Auditor

Students who wish to audit courses must obtain the permission of the Registrar. The participation of auditors in class discussion or in tests or examinations is optional with the instructor. Auditors receive no credit for courses taken. They are, however, expected to attend classes regularly.

Veterans

The Gaston Technical Institute is approved by the Veterans Administration for the training of veterans under Public Law 550 (Korean) and Public Law 894 (Korean disability), as well as for the training under Public Law 634 of sons of deceased veterans.

The veteran is not considered to be attending under Public Law 550 until such time as he presents a VA Certification of Entitlement. To obtain this certificate the veteran should apply to his local Veterans Administration office.

On the "Application for Program of Education and Training," VA form VB 7-1990, the final objective under Item 15 should be shown as "Associate in Applied Science degree (Civil Technology)" or with another appropriate technology indicated.

For veterans who have been enrolled at another institution under Public Law 550, the application should be made on VA form VB 7-1995, "Request for Change of Program or Change of Place of Training." The new curriculum should be shown under Item 7 as "Civil Technology," for example, and the new objective under Item 8 as "Associate in Applied Science degree." Under Item 10 the program should be shown as "Associate in Applied Science degree (Civil Technology)," for example.

CAUTION TO VETERANS: Monthly subsistence checks are paid by the government directly to the Public Law 550 veteran, and the veteran is personally responsible to the school for his expenses. Veterans, however, do not begin to receive their checks until at least a month and a half after they are enrolled. They, therefore, should come prepared to pay in advance for all fees and books and supplies or to make arrangements with the school for deferred payments. Veterans will also need to be prepared to pay for their room and board.

Vocational Rehabilitation

All students receiving North Carolina state vocational rehabilitation assistance should be familiar with vocational rehabilitation regulations and authorizations. Students are responsible for any fees or charges not included in the specific authorization for the individual student. Authorizations are not always the same for different students and may be modified or cancelled during a student's enrollment.

Vocational rehabilitation students are required to maintain a "C" average for each enrolled quarter. Failure to maintain such an average will probably result in suspension of the authorization until such time as the student improves his academic average to a satisfactory level by enrollment for an additional term or terms at the student's own expense.

IBM Co-op Program

Each year one student in Electronics Technology is selected to participate in the International Business Machines Corporation Co-operative Training Program. This program allows a student to drop out of school for a period and work in one of the IBM District Offices. During this work period the student will be paid a training salary and will work with field engineers on IBM equipment. Upon completion of this work program the student will return and complete his required courses.

Procedure in Applying for Admission

The applicant, if distance is not too great, should make a personal application. An application form and high school or college transcript must be submitted. The application form, which indicates completely what information is required, may be obtained from and should be submitted to:

Registrar
Gaston Technical Institute
1025 West Franklin Avenue
Gastonia, North Carolina
Telephone: 864-5711, Area Code 704

Information and application forms may also be obtained from:

Director
College Extension Division
North Carolina State College
Raleigh, North Carolina

The personal information called for on the application form should be completed by the student. This form should then be given or sent to the high school principal along with a stamped envelope addressed to the Registrar, Gaston Technical Institute, and with a $10 check or money order payable to the Gaston Technical Institute. This money is applied toward the regular registration fee. The registration fee may be paid separately rather than with the application form, but action on the application will not be taken until this deposit is received. This fee is refunded to a student whose application is denied. It is forfeited by applicants who are accepted but who do not enroll.

Books, Equipment, and Supplies

All textbooks, instruments, equipment, and supplies needed by the student may be purchased at the Bookstore operated by the Institute. Cost of books and supplies is estimated at not more than $120 per academic year.

Cafeteria

The cafeteria is operated on a non-profit basis, offering three nourishing meals each day, Monday through Friday. The cafeteria is under the management of a trained chef and serves a wide selection of excellent food. Three complete meals may be enjoyed for the nominal cost of about $2 daily.

Room and Board

Room and board for single students will range from $18 to $20 per week. Married students may obtain either furnished or unfurnished apartments at various rent levels. Assistance in obtaining suitable living quarters will be given through the business office.

Tuition and Fees

The following tuition and fees are applicable each quarter for regular full-time students:

Registration Fee	$ 10
*Tuition	65
Laboratory Fee	10
Student Activities Fee	10
Medical Fee (Comprehensive Insurance Coverage)	5
Total Tuition and Fees per quarter	$100

* Tuition for out-of-state students is $100 per quarter.

Late Registration

A late registration fee of $5 is charged for registration after the days designated in the calendar.

Medical Fee

In the absence of the usual medical facilities, comprehensive insurance benefits are provided for the approximate nine months of the regular term, beginning 48 hours prior to entrance and ending 48 hours after completion of the quarter.

Refund

A refund of the amount paid the Institute, less the registration fee, is made to a student withdrawing within ten days from the date of registration. No refund will be made if a student withdraws after this ten-day period.

Payment Schedule

Tuition and fees are payable in advance each term, on registration day. Individual arrangements may be made, if need is shown, for payment of tuition and fees on an installment basis. A service charge of $2 per quarter is made for this arrangement. Charges so deferred remain due and payable even though a student withdraws from school after the ten-day period referred to under Refunds.

Commencement Fee

A commencement fee of $10 is charged during the last quarter prior to graduation. This fee covers the cost of diploma, cap, and gown, and is applicable without regard to participation or non-participation in commencement exercises.

Summary of Expenses

Charges for tuition and fees depend upon a student's status as an in-state or out-of-state resident at the time of his first enrollment, and as to amount of work carried (full-time or part-time).

Total expenses for a regular, full-time student from North Carolina, exclusive of clothing, pocket money, travel, and other incidentals, need not exceed $900 per academic year of nine months. Out-of-state students will need an additional $100.

Residence Status for Tuition Payment

The tuition charge for legal residents of North Carolina is less than for nonresidents. A legal resident of North Carolina is one who has his domicile in this state. It is important that each applicant for admission and each enrolled student know his residence status for tuition payment and understand the regulations governing residence status. The following regulations cover most factual situations:

1. A person 21 years of age or older is not deemed eligible for the lower tuition rate unless he has maintained his legal residence in North Carolina for at least the six months next preceding the date of his first enrollment in an institution of higher education in this state.
2. The legal residence of a person under 21 years of age at the time of his first enrollment in an institution of higher education in this state is that of his parents, surviving parent, or legal guardian.
3. The residence status of any student is determined as of the time of his first enrollment in an institution of higher education in North Carolina and may not thereafter be changed except: (a) in the case of a nonresident minor student at the time of his first enrollment whose parents have subsequently established legal residence in North Carolina; and (b) in the case of a resident who abandons his legal residence in North Carolina. In either case, the appropriate tuition rate will become effective at the beginning of the quarter next following the date of change of residence status.

Students Taking Less than 7 Hours

Students taking not more than 4 credit hours will be charged one-fourth tuition ($16.25 in-state, $25 out-of-state), one-fourth academic fees ($5), and no non-academic fees (total $21.25 in-state, $30 out-of-state). These students will not be entitled to any of the services and privileges provided by the non-academic fees. Students taking 5 or 6 credit hours will be charged one-half tuition ($32.50 in-state, $50 out-of-state), one-half academic fees ($10), and all non-academic fees $15, (total $57.50 in-state, $75 out-of-state). All other students will pay full tuition and fees.

Auditors

Regularly enrolled students may audit courses without additional charge. Those not regularly enrolled (registered for audit only) will pay the rates applicable to regular students.

Financial Aid

Help in meeting college expenses is available to students in several forms: scholarships, loans, deferred payment on tuition and fees, and part-time jobs.

Two Jefferson Standard Foundation Scholarships in Electronics Technology are available annually to graduates of North Carolina and South Carolina high schools and preparatory schools.

The American Society of Tool and Manufacturing Engineers, Piedmont Chapter 82, has established a student loan fund for students in Mechanical and Production Technology. Loans are granted by the Gaston Technical Institute on the basis of need and scholarship.

Graduation Requirements

An Associate in Applied Science degree in the selected technological field will be awarded to the applicant who is recommended by the faculty as having satisfactorily completed the prescribed course of study. It is expected that the applicant will attain a cumulative scholastic point average of not less than 1.75.

Commencement exercises are held annually at the conclusion of the spring quarter. All candidates for graduation, including those who complete their requirements for graduation at times other than at the conclusion of the spring quarter, are urged and expected to participate in the annual commencement exercises.

Two quarters of work in residence at the Gaston Technical Institute is required of all candidates for graduation. Residence at North Carolina State College in Raleigh, North Carolina, can be considered as residence at the Gaston Technical Institute for one of these quarters.

Grade Point System

Gaston Technical Institute operates on a credit-point system. Quarter credits represent the number of hours completed with a passing grade; quality points are determined by the grade earned. Each grade is assigned a "grade point equivalent" in quality points for each quarter credit hour scheduled. The scholastic point average is determined by dividing the total quality points earned by the total number of quarter credit hours scheduled.

GRADE	GRADE POINT EQUIVALENT
A—Excellent	4 quality points for each credit hour
B—Good	3 quality points for each credit hour
C—Fair	2 quality points for each credit hour
D—Passing	1 quality point for each credit hour
F—Failure	0 quality points and 0 credit hours

I—Incomplete. This signifies that the student is incomplete in some report or other work assigned by his instructor or that he has an excused absence for the final examination, which will be given him at some later date, but is otherwise passing. An "I" must be completed satisfactorily during the next quarter or it automatically becomes an "F."

WP—Withdrawn Passing. This signifies that a student has withdrawn from a course voluntarily prior to the "last day to drop a course without failure," or that he has withdrawn from a course voluntarily with a passing grade prior to the "last day to withdraw from school without failure." No penalty is incurred. Credit hours are not counted in computation of scholastic point average.

WF—Withdrawn Failing. This signifies that a student has been dropped from a course because of a failing grade or excessive absences, after the "last day to drop a course without failure." Failure penalty is incurred in same manner as for grade of "F."

Counseling and Guidance

The student-faculty relationship at Gaston Technical Institute is based upon the friendly, applied philosophy that every student is an individual, that all students occasionally have problems, and that no teacher, department head, or other member of the administration is ever too busy to help students solve their problems.

Upon registration, every freshman is assigned to a basic studies advisor. This faculty member serves as the student's course advisor and is responsible for scheduling the student, following his scholastic progress, and assisting him if he encounters difficulty. When the student is enrolled in the first course in his major area he is assigned to the department head who then becomes his advisor until graduation.

The student's teachers are also sympathetic and helpful and spend many hours of their spare time in special sessions coaching and tutoring students who need additional help.

Close cooperation between student and teacher and the freedom granted the student to drop in on his teacher, course advisor, registrar, or director to talk over a problem are two of the major contributing factors to the success Gaston Technical Institute has enjoyed throughout its existence.

The total counseling and guidance program, under the direction of a professionally trained counselor, provides for the following activities:

Visitations to Gaston Tech by prospective students and/or parents for the purpose of personal interviews.

Visitations to high schools by representatives of Gaston Tech in connection with College Day and Career Day programs.

Pre-testing of applicants by a series of entrance examinations offered during the spring and summer months.

Evaluation of test results on individual basis for pre-entrance recommendations.

Orientation programs during registration week.

Group interpretation of test results in relation to schedule decisions.

Assignment of students to basic study course advisors for continuous supervision of student progress.

Remedial, non-credit mathematics course for students having initial deficiencies in mathematics.

Assignment of advanced students to technical division course advisors for continuous supervision of student progress.

Student-advisor consultations with permanent record of conferences and scheduled availability of advisors.

Placement of Graduates

An active and organized placement service is maintained under the supervision of a Placement Director. This service is available to all prospective graduates and alumni.

Approximately seventy employer organizations conduct regularly scheduled visitations to the Institute for interview purposes. These company representatives from throughout the southeastern region usually conduct general interviews for all interested students at which employment policies, practices, and opportunities are discussed in general terms. These general interviews are followed by scheduled individual student interviews of approximately twenty minutes duration. On the basis of these individual interviews and of the student records and recommendations furnished by the Institute, the employer representatives will offer employment to some of the students interviewed. These employment offers are usually made by individual letters to the students within a few weeks following the interviews.

In addition to the employer visitations at the Institute a number of field trips are arranged during the year for prospective graduates. These field trips serve the dual purpose, as do the general interviews on campus, of providing industrial orientation for the students as well as opportunities for placement interviews.

A placement library is maintained to provide the prospective graduate with advance information on employment opportunities and company policies.

Information on prospective graduates as to numbers, specializations, and qualifications is furnished on a regular basis to a growing number of firms employing technical manpower both within and without the Piedmont area.

This placement service is also available to alumni of the Institute who for one reason or the other find it desirable to change employment.

Regular follow-up surveys of job titles, job descriptions, and salaries for all graduates are conducted in order to maintain current information on the status and progress of graduates.

Because of the critical shortage of qualified technically trained personnel, the employment opportunities for the graduate engineering technician are exceptional. The prospective graduate has, on the average, approximately six excellent employment offers providing exceptional opportunity for both professional and financial advancement on the forefront of the expanding frontier in engineering technology.

On-Campus Interview with Company Representatives

STUDENT ACTIVITIES

Class Officers

The Freshman Class (first-year students) and the Senior Class (second-year students) elect three class officers each—a President, a Vice-President, and a Secretary-Treasurer—who are concerned with activities and interests of their respective groups.

Student Council

The student body as a whole is represented by an elected Student Council composed of a President, four Senior Class Representatives, four Freshman Class Representatives, and the Presidents of the Freshman and Senior Classes.

The Student Council is responsible for policy on student behavior, for all student social events, and for all student fund-raising ventures. The Council is also responsible for scheduling and publishing a calendar of student events which includes meetings of the various clubs, assemblies, and social events.

A student body meeting is held each Thursday at 12:30 p.m. Attendance is compulsory for all students. The Council is in charge of the program at these meetings.

Student Clubs

ASSOCIATE ENGINEERS CLUB. This Club is sponsored by the Charlotte Engineers Club and is open to students of demonstrated academic proficiency who are concerned with the professional aspects of engineering technology.

COLLEGIATE CIVITAN CLUB. An on-campus group sponsored by the Gastonia Civitan Club which is open to students selected by the club. This is a service club. Projects are undertaken which will be beneficial to the school and to the community.

AMATEUR RADIO CLUB. A club which is open to all students of Gaston Tech. Its purpose is to help students who do not have an FCC amateur license to obtain one, to work for a higher license, and to enjoy the best of all hobbies—"Ham Radio."

CIVIL CLUB. A club open to all students enrolled in Civil Technology which offers the student an opportunity to participate in all phases of civil engineering by field-trips to various construction projects. It also affords a means of social expression for those who are members.

INSTITUTE OF RADIO ENGINEERS. An IRE Student Associate Branch provides an opportunity for professional development for students in Electronics Technology.

ASTME. Student Chapter #28 of the American Society of Tool and Manufacturing Engineers is open to all students enrolled in Mechanical and Production Technology. Regular meetings are held at which technical aspects of production, tooling and manufacturing procedures are discussed.

Publications

Students who are interested in publications may become members of the staff of either of the two publications at Gaston Tech.

The college annual, Tech Paths, is published yearly and affords an opportunity for students to work with photography, cartoon work, journalism, or lay-out design.

The Technical Reporter is a monthly newspaper published by the students. The final copy each year is devoted entirely to senior activities and is produced by the Senior Class.

The publications at Gaston Tech are partially supported by a publications fee which is part of the student activities fee.

Staff members who meet the requirements of publications work receive special recognition at the end of the year when keys are presented at Awards Day.

College Annual Staff at Work

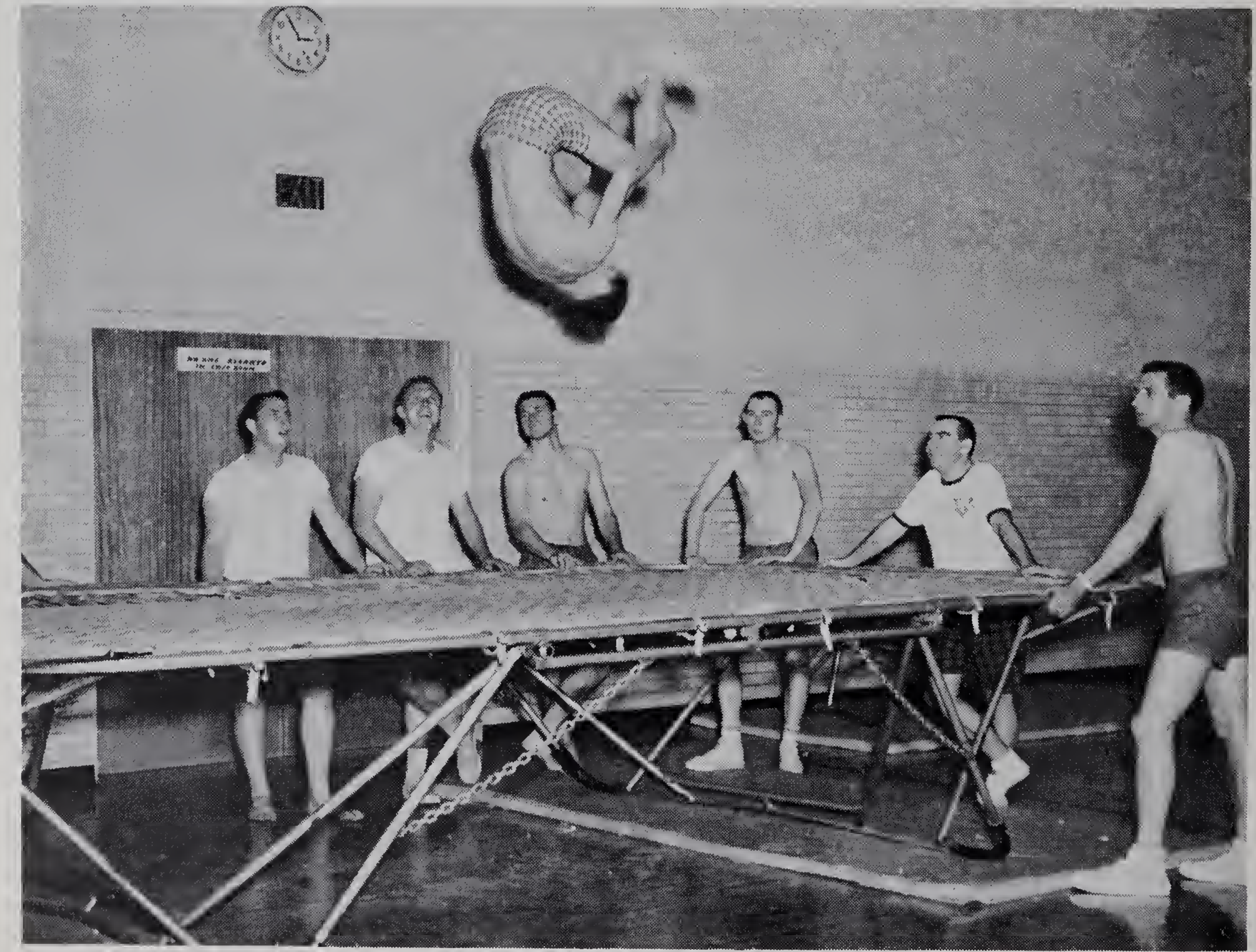
Intramurals and Recreation

The Gaston Technical Institute offers a planned program of intramural activities. These activities include touch football, volleyball, horseshoes, badminton, bowling, and soft ball. The teams are composed of students from the four different departments. During the fall, touch football and bowling are the sports in which most students participate. During the spring, softball and badminton are the main sports played. Pool, table tennis, and tennis are other recreational activities available to the student body.

In the spring a Student-Faculty Outing is held at which a student-faculty softball game is played. This outing provides an opportunity for fun and clowning by all, which adds to a closer working relationship within the Institute.

The municipal recreational facilities of the City of Gastonia include tennis courts, a golf course, swimming pool, and fishing and outing facilities. These facilities are available to all students.

All students are members of the local YMCA and all facilities are available to them. The "Y" building is new and has some of the best facilities in the South. A physical education program consisting of a series of activities is conducted by the YMCA for students attending Gaston Tech. Some of the activities to be enjoyed at the "Y" are swimming, gymnastics, fencing, trampoline, basketball, arts and crafts, tennis, badminton, and volleyball.



COLLEGE CALENDAR—1962-1963

First Summer Session, 1962

June 7-8	Thursday-Friday	Registration and class assignments. Late registration fee of $5 payable by all who register after June 7.
June 11	Monday	First day of classes.
June 12	Tuesday	Last day for registration and last day for refund less $5 registration fee.
July 13	Friday	Last day of classes.
July 16	Monday	Final examinations.

Second Summer Session, 1962

July 19-20	Thursday-Friday	Registration and class assignments. Late registration fee of $5 payable by all who register after July 19.
July 23	Monday	First day of classes.
July 24	Tuesday	Last day for registration and last day for refund less $5 registration fee.
August 24	Friday	Last day of classes.
August 27	Monday	Final examinations.

Fall Quarter, 1962

September 5	Wednesday	New student registration begins in auditorium at 9 a.m.
September 6	Thursday	Registration for returning students. New student orientation and testing. Late registration fee of $5 payable by all who register after September 6.
September 7	Friday	Completion of registration procedures. General assembly at 2 p.m.
September 10	Monday	First day of classes.
September 19	Wednesday	Last day for registration and last day for refund less $10 registration fee.
September 28	Friday	Last day to drop a course without failure.
October 15	Monday	Mid-term reports due.
October 26	Friday	Last day to withdraw from school without failure.
November 16	Friday	Last day of classes.
November 19-21	Monday-Wednesday	Final examinations, Fall Quarter.
November 22-28	Thursday-Wednesday	Thanksgiving Holidays.

Winter Quarter, 1962-1963

November 29	Thursday	Registration for all students. Late registration fee of $5 payable by all who register after November 29.
November 30	Friday	Completion of registration procedures. General assembly at 2 p.m.
December 3	Monday	First day of classes.
December 12	Wednesday	Last day for registration and last day for refund less $10 registration fee.
December 19	Wednesday	Last day of classes before Christmas Holidays.
January 3	Thursday	Classwork resumes at 8 a.m.
January 4	Friday	Last day to drop a course without failure.
January 21	Monday	Mid-term reports due.
February 1	Friday	Last day to withdraw from school without failure.
February 22	Friday	Last day of classes.
February 25-27	Monday-Wednesday	Final examinations, Winter Quarter.

Spring Quarter, 1963

March 6	Wednesday	New student registration begins in auditorium at 9 a.m.
March 7	Thursday	Registration for returning students. New student orientation and testing. Late registration fee of $5 payable by all who register after March 7.
March 8	Friday	Completion of registration procedures. General assembly at 2 p.m.
March 11	Monday	First day of classes.
March 20	Wednesday	Last day for registration and last day for refund less $10 registration fee.
March 29	Friday	Last day to drop a course without failure.
April 11	Thursday	Last day of classes before Easter Holidays.
April 12-16	Friday-Tuesday	Easter Holidays
April 17	Wednesday	Classwork resumes at 8 a.m.
April 22	Monday	Mid-term reports due.
May 3	Friday	Last day to withdraw from school without failure.
May 24	Friday	Last day of classes.
May 26	Sunday	Baccalaureate Service at 3 p.m.
May 27-29	Monday-Wednesday	Final examinations, Spring Quarter.
June 1	Saturday	Commencement Exercises at 11 a.m.

Dates for 1963 Summer Quarter will be announced later.

GASTON TECHNICAL INSTITUTE
PROGRAM OF STUDY

The Curricula

The Degree of Associate in Applied Science is awarded in the following four technologies:

CIVIL TECHNOLOGY
an ECPD accredited Engineering Technician Curriculum
ELECTRICAL TECHNOLOGY
an ECPD accredited Engineering Technician Curriculum
ELECTRONICS TECHNOLOGY
an ECPD accredited Engineering Technician Curriculum
MECHANICAL AND PRODUCTION TECHNOLOGY
an ECPD accredited Engineering Technician Curriculum

On the following pages are the detailed curricula for the four technologies presently offered. It may be noted that the same courses are required for the first two quarters of all four curricula. Additional common core subjects for all curricula include Math 131, Analytic Geometry and Calculus; Phys 131, Sound and Light; Engl 242, Technical Reports, and Engl 252, Public Speaking.

The course IndT 262, Personnel Supervision, is required in all curricula except Civil Technology.

The curricula in Electrical Technology and Electronics Technology are identical through the first three quarters and differ by only 25 quarter hours for the last three quarters.

Accreditation

Each of the four technical institute curricula listed above is accredited as an engineering technician curriculum by the Engineers' Council for Professional Development.

Course Numbers and Hours

The three-digit course numbers indicate the year during which the course is normally offered (first digit), the quarter during which the course is normally offered (second digit), and the subject matter area (third digit). Thus IndT 262 indicates that the course in Personnel Supervision is normally offered during the second year, the sixth quarter, and is one of the second series of courses offered in the area of Industrial Technology.

The numbers opposite the individual course listings in the curricula represent class contact hours of recitation per week, laboratory contact hours per week, and quarter credit hours. Thus Phys 111, Mechanics and Heat, 5-3-6, indicates that the first course in physics includes 5 hours of classroom recitation per week and one 3-hour laboratory period per week for a credit of 6 quarter hours.

In the course descriptions which follow, the same information is provided in slightly different form. The information for Phys 111, for example, is shown as 6 (5-3) indicating 6 quarter hours credit, 5 class hours and 3 laboratory hours per week.

DEPARTMENT OF CIVIL TECHNOLOGY

Mr. J. David Vance, Assistant Professor, In Charge

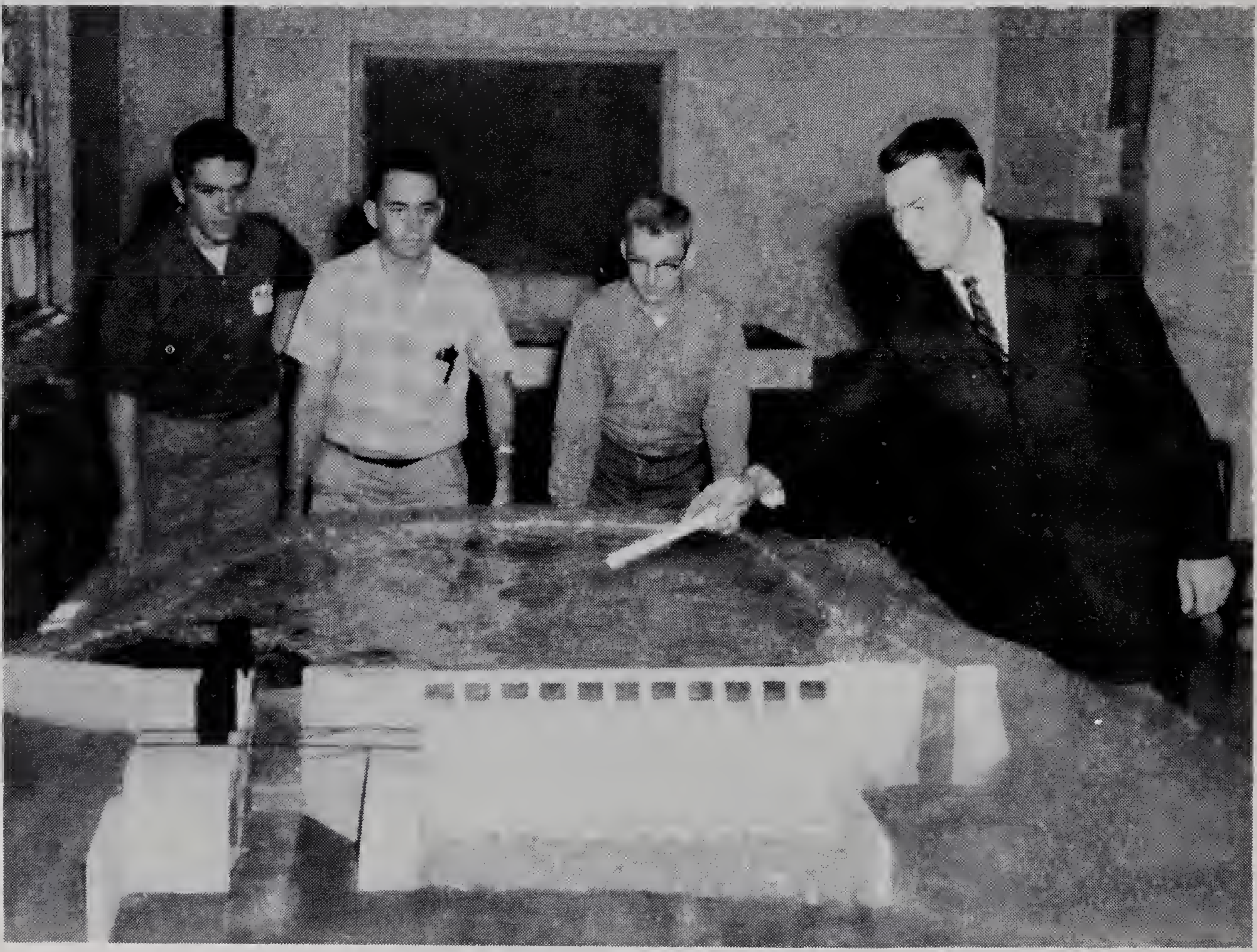
Mr. Clyde H. Robinson, Assistant Professor

The program of study in Civil Technology is designed to prepare the student for various positions in the construction and transportation fields of engineering. The training received will enable the graduate to perform such duties as estimating, specification writing, surveying, inspection, or supervising with both public and private firms. The practice of land surveying, on a self-employed basis if desired, is open to the graduate upon registration. In addition to having an excellent stock of surveying equipment supplied by the State Highway Department, the laboratory is equipped with the essential tools to provide the student with a first-hand working knowledge of the properties and testing procedures for various engineering materials.

The program also gives training in methods and equipment used in heavy engineering types of construction and considerations of the provisions and practical applications of construction contracts and specifications.

The purpose of the course in Civil Technology is to equip the student with knowledge of practical applications within the broad field of Civil Engineering, on as wide a basis as may be accomplished in a two-year program.

A more complete description of each course required is found in the back of this catalog.



Study of Heavy Construction Materials and Methods

CIVIL TECHNOLOGY

an ECPD accredited Engineering Technician Curriculum

1st Quarter	**Rec.**	**Lab.**	**Cr.**
Draw 111 Engineering Drawing	0	6	2
Engl 111 Composition	5	0	5
Math 111 Algebra and Trigonometry	5	0	5
Phys 111 Mechanics and Heat	5	3	6
Shop 111 General Metal Shop	0	3	1
	15	12	19
2nd Quarter			
Draw 121 Engineering Drawing	0	6	2
Engl 121 Composition	5	0	5
Math 121 Algebra and Trigonometry	5	0	5
Phys 121 Electricity and Magnetism	5	3	6
Shop 121 General Metal Shop	0	3	1
	15	12	19
3rd Quarter			
CivT 131 Plane Surveying	3	6	5
CivT 132 Statics and Dynamics	5	0	5
Draw 131 Descriptive Geometry	0	3	1
Math 131 Analytic Geometry and Calculus	5	0	5
Phys 131 Sound and Light	2	3	3
	15	12	19
4th Quarter			
CivT 241 Topographic Surveying	3	6	5
CivT 242 Strength of Materials	5	0	5
CivT 243 Elements of Concrete	3	3	4
CivT 244 Graphics	2	6	4
Engl 242 Technical Reports	2	0	2
	15	15	20
5th Quarter			
CivT 251 Route Surveying	3	6	5
CivT 253 Soil Properties	2	3	3
CivT 255 Contracts and Specifications	3	0	3
CivT 256 Construction Methods and Estimates	5	3	6
Engl 252 Public Speaking	2	0	2
	15	12	19
6th Quarter			
CivT 261 Land Surveying	3	3	4
CivT 262 Elements of Hydraulics and Hydrology	2	0	2
CivT 263 Reinforced Concrete	3	0	3
CivT 264 Structural Practice	2	6	4
CivT 266 Construction Methods and Estimates	5	3	6
	15	12	19
GRAND TOTAL	90	75	115

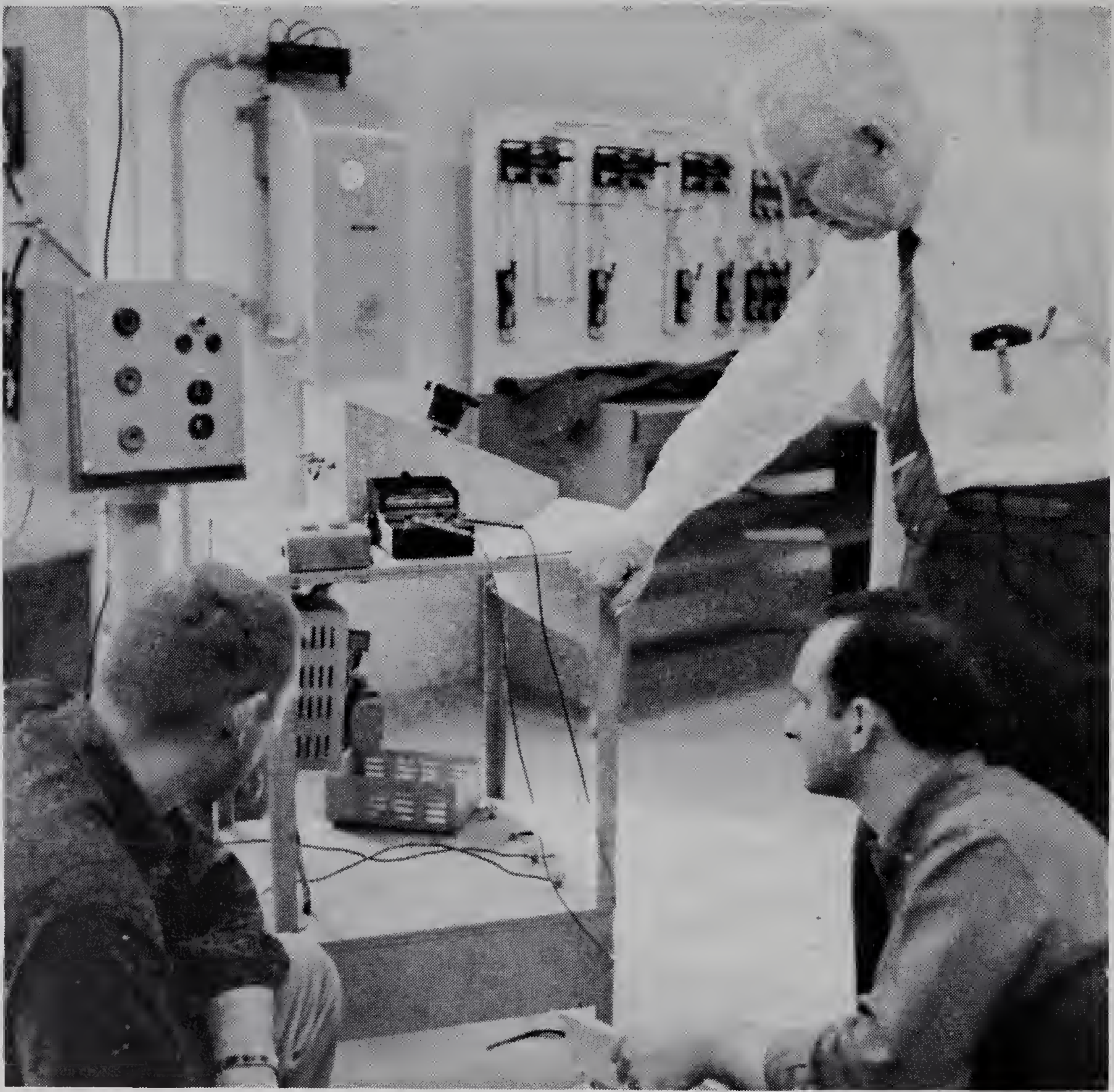
DEPARTMENT OF ELECTRICAL TECHNOLOGY

Mr. Raymond A. Fuhrer, Assistant Professor, In Charge

The program of study in Electrical Technology is designed to prepare the student for that large area of opportunity between that of the electrician and that of the electrical engineer. The program is founded upon a carefully selected group of courses that will enable the graduate to enter a wide number of activities such as drafting, sales, supervision of installations, maintenance of power plants and other electrical equipment, and electrical contracting. Many of the graduates go into industry as manufacturing and production technicians.

This program will also equip the student with a knowledge of electrical practice in the commercial, residential, and industrial fields on as wide a basis as may be completed in a two-year course.

A more complete description of each course required is found in the back of this catalog.



Electrical Control and Instrumentation

ELECTRICAL TECHNOLOGY

an ECPD accredited Engineering Technician Curriculum

1st Quarter	Rec.	Lab.	Cr.
Draw 111 Engineering Drawing	0	6	2
Engl 111 Composition	5	0	5
Math 111 Algebra and Trigonometry	5	0	5
Phys 111 Mechanics and Heat	5	3	6
Shop 111 General Metal Shop	0	3	1
	15	12	19
2nd Quarter			
Draw 121 Engineering Drawing	0	6	2
Engl 121 Composition	5	0	5
Math 121 Algebra and Trigonometry	5	0	5
Phys 121 Electricity and Magnetism	5	3	6
Shop 121 General Metal Shop	0	3	1
	15	12	19
3rd Quarter			
Draw 133 Electrical Drafting	0	3	1
ElecT 131 Electric Fields and Circuits	3	3	4
ElecT 132 Electrical Machinery	5	3	6
Math 131 Analytic Geometry and Calculus	5	0	5
Phys 131 Sound and Light	2	3	3
	15	12	19
4th Quarter			
ElecT 241 A-C Circuits	5	3	6
ElecT 243 Elements of Electronics	5	6	7
ElecT 244 Wiring, Codes and Specifications	3	3	4
Engl 242 Technical Reports	2	0	2
	15	12	19
5th Quarter			
ElecT 251 A-C Circuits	5	3	6
ElecT 252 A-C Machinery	3	3	4
ElecT 253 Electronic Circuits	5	6	7
Engl 252 Public Speaking	2	0	2
	15	12	19
6th Quarter			
ElecT 262 A-C Machinery	3	3	4
ElecT 264 Wiring Methods and Estimates	4	6	6
ElecT 266 Power Distribution	3	0	3
IndT 262 Personnel Supervision	2	0	2
MechT 264 Industrial Instrumentation	3	3	4
	15	12	19
GRAND TOTAL	90	72	114

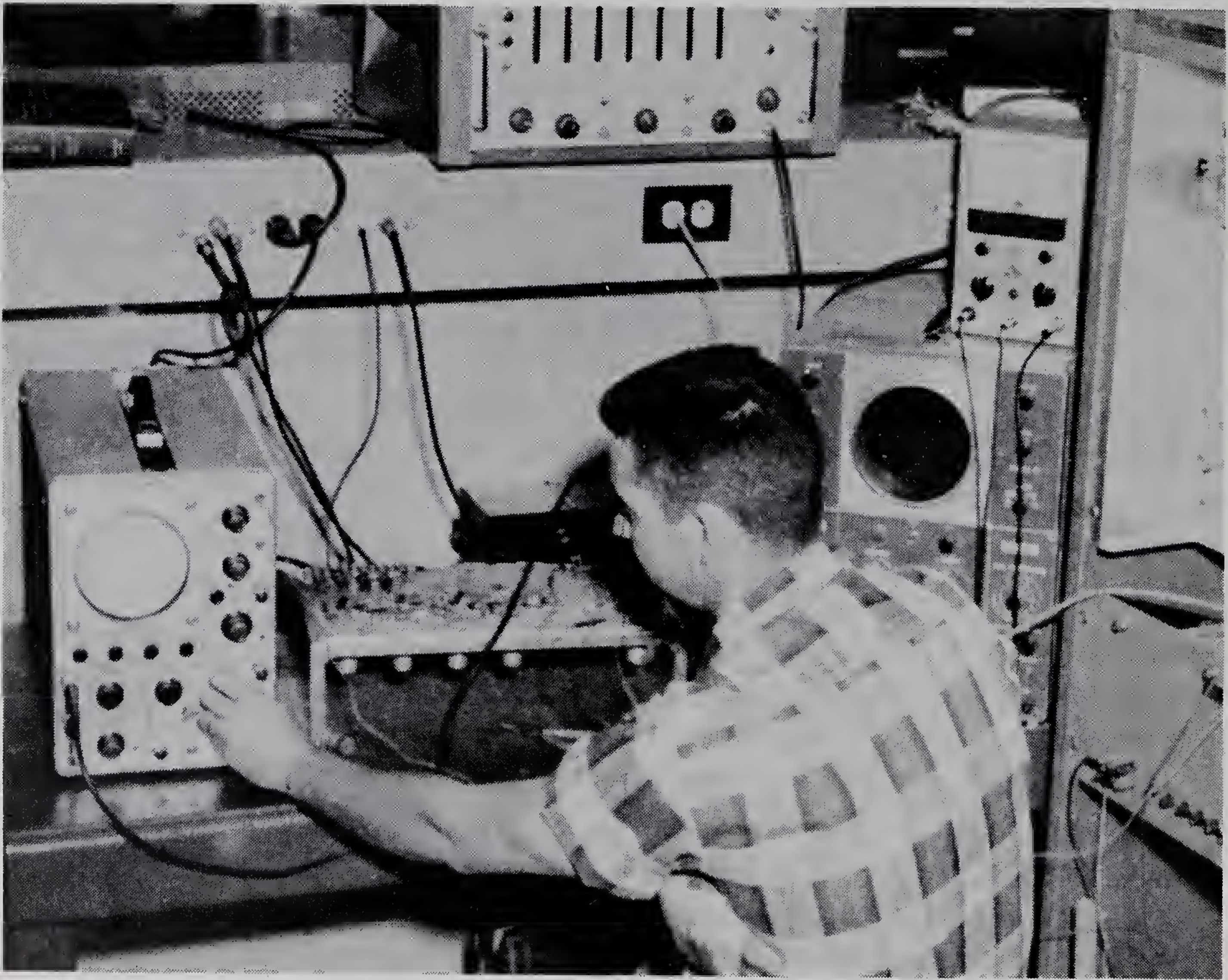
DEPARTMENT OF ELECTRONICS TECHNOLOGY

Mr. Donald R. Abernathy, Instructor
Mr. Richard L. Edwards, Instructor
Mr. Carl M. King, Instructor

The program of study in Electronics Technology is designed to provide the student with a thorough background in the basic studies and sciences and to provide him with the essential specialized courses in the electronics area. Emphasis is upon the broad area of electronics endeavor. Modern laboratory equipment provide for a comprehensive treatment of advanced electronics instrumentation. Graduates are employed in manufacturing, production, testing, inspection, promotion, and sale of electronic equipment and systems.

There is a bright future for the Electronics Technology graduate in the building, installation, and maintenance of the electronic devices that are now considered essential to so many phases of our industrial society.

A more complete description of each course required is found in the back of this catalog.



Electronic Instrumentation

ELECTRONICS TECHNOLOGY

an ECPD accredited Engineering Technician Curriculum

1st Quarter	**Rec.**	**Lab.**	**Cr.**
Draw 111 Engineering Drawing	0	6	2
Engl 111 Composition	5	0	5
Math 111 Algebra and Trigonometry	5	0	5
Phys 111 Mechanics and Heat	5	3	6
Shop 111 General Metal Shop	0	3	1
	15	12	19
2nd Quarter			
Draw 121 Engineering Drawing	0	6	2
Engl 121 Composition	5	0	5
Math 121 Algebra and Trigonometry	5	0	5
Phys 121 Electricity and Magnetism	5	3	6
Shop 121 General Metal Shop	0	3	1
	15	12	19
3rd Quarter			
Draw 133 Engineering Drafting	0	3	1
ElecT 131 Electric Fields and Circuits	3	3	4
ElecT 132 Electrical Machinery	5	3	6
Math 131 Analytic Geometry and Calculus	5	0	5
Phys 131 Sound and Light	2	3	3
	15	12	19
4th Quarter			
ElecT 241 A-C Circuits	5	3	6
ElecT 243 Elements of Electronics	5	6	7
ElecT 245 Applied Mathematics	3	3	4
Engl 242 Technical Reports	2	0	2
	15	12	19
5th Quarter			
ElecT 251 A-C Circuits	5	3	6
ElecT 253 Electronic Circuits	5	6	7
ElecT 255 Semiconductor Applications	3	3	4
Engl 252 Public Speaking	2	0	2
	15	12	19
6th Quarter			
ElecT 263 Communications	3	6	5
ElecT 265 Pulse and Digital Techniques	5	3	6
ElecT 267 UHF Techniques	3	3	4
ElecT 269 Codes and Regulations	2	0	2
IndT 262 Personnel Supervision	2	0	2
	15	12	19
GRAND TOTAL	90	72	114

DEPARTMENT OF MECHANICAL AND PRODUCTION TECHNOLOGY

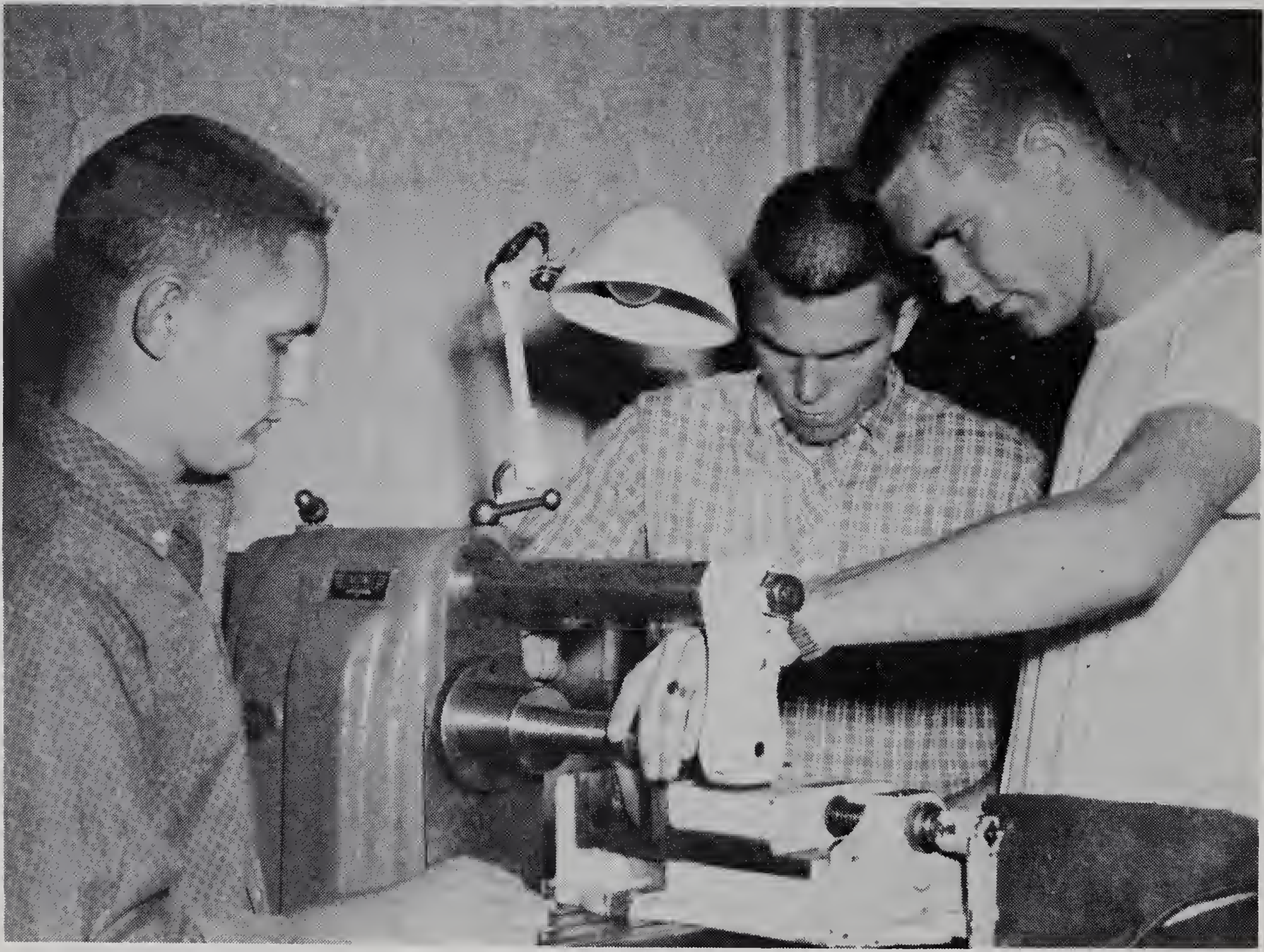
Mr. Robert M. Michael, Assistant Professor, In Charge

Mr. Porter Lee McAteer, Instructor

The program of study in Mechanical and Production Technology has as its objective the training of personnel to assist the engineer or the small industry in the planning of production processes and equipment, tooling, supervision of personnel, production of material goods, sales, and drafting. A study of the second-year courses will show a wide range of endeavor to familiarize the student with every phase of these processes.

The versatility of the mechanical and production technician results in a demand for him in all types of industry.

A more complete description of each course required is found in the back of this catalog.



Precision Tools and Methods

MECHANICAL AND PRODUCTION TECHNOLOGY

an ECPD accredited Engineering Technician Curriculum

1st Quarter	**Rec.**	**Lab.**	**Cr.**
Draw 111 Engineering Drawing	0	6	2
Engl 111 Composition	5	0	5
Math 111 Algebra and Trigonometry	5	0	5
Phys 111 Mechanics and Heat	5	3	6
Shop 111 General Metal Shop	0	3	1
	15	12	19
2nd Quarter			
Draw 121 Engineering Drawing	0	6	2
Engl 121 Composition	5	0	5
Math 121 Algebra and Trigonometry	5	0	5
Phys 121 Electricity and Magnetism	5	3	6
Shop 121 General Metal Shop	0	3	1
	15	12	19
3rd Quarter			
CivT 132 Statics and Dynamics	5	0	5
Draw 131 Descriptive Geometry	0	3	1
Draw 132 Machine Sketching	0	3	1
Math 131 Analytic Geometry and Calculus	5	0	5
MechT 131 Production Technology	3	3	4
Phys 131 Sound and Light	2	3	3
	15	12	19
4th Quarter			
CivT 242 Strength of Materials	5	0	5
Engl 242 Technical Reports	2	0	2
MechT 241 Production Technology	3	3	4
MechT 242 Engineering Materials	3	3	4
MechT 243 Jig and Fixture Design	2	6	4
	15	12	19
5th Quarter			
ElecT 258 Electric Circuits and Machines	5	3	6
Engl 252 Public Speaking	2	0	2
IndT 251 Motion and Time Study	2	3	3
MechT 251 Production Technology	3	3	4
MechT 252 Mechanisms	3	3	4
	15	12	19
6th Quarter			
IndT 261 Production and Quality Control	5	0	5
IndT 262 Personnel Supervision	2	0	2
MechT 262 Mechanical Design	3	3	4
MechT 263 Tool and Die Design	2	6	4
MechT 264 Industrial Instrumentation	3	3	4
	15	12	19
GRAND TOTAL	90	72	114

DESCRIPTION OF COURSES

CIVIL TECHNOLOGY

Mr. Vance, Mr. Robinson

CivT 131 Plane Surveying 5 (3-6)
Prerequisite: Math 121 Mr. Vance
Principles and practice of taping, leveling, and transiting; care and adjustment of instruments; angles, bearings, and azimuths; construction surveying; transit-tape surveys.

CivT 132 Statics and Dynamics
Prerequisites: Math 121, Phys 111 Mr. Robinson
Forces, resultants, and equilibrium by analytical and graphical methods; moments and couples; forces in simple structures and trusses; static and kinetic friction; kinetics; force, mass, acceleration, and momentum.

CivT 241 Topographic Surveying 5 (3-6)
Prerequisite: CivT 131 Mr. Vance
Stadia surveys; contours; latitudes, departures, and coordinates; area computations; map construction; field astronomy; basic triangulation; profiles, cross-sections, and volumes of earthwork.

CivT 242 Strength of Materials 5 (5-0)
Prerequisites: CivT 132, Math 131 Mr. Robinson
Simple stresses; properties of materials; center of gravity, centroids, and moments of inertia; shear and moment diagrams; analysis and design of simple beams and columns; combined stresses.

CivT 243 Elements of Concrete 4 (3-3)
Prerequisite: CivT 132 Mr. Robinson
An intensive study of the composition and properties of concrete; proportioning of concrete mixes; control and testing of varied concretes; field inspection of concrete manufacturing, placing, and curing.

CivT 244 Graphics 4 (2-6)
Prerequisites: CivT 132, Draw 121 Mr. Robinson
Graphic standards; codes and ordinances, construction details; preparation of working drawings.

CivT 251 Route Surveying 5 (3-6)
Prerequisite: CivT 241 Mr. Vance
Reconnaissance, preliminary and location surveys; theory and application of simple, compound, and reverse circular curves; spirals, and parabolic vertical curves; highway safety and design controls; plan and profile drawings.

CivT 253 Soil Properties 3 (2-3)
Prerequisite: CivT 243 Mr. Robinson
A study of the origin and types of soils and their engineering properties; basic laboratory and field testing of soils; methods of compaction.

CivT 255 Contracts and Specifications 3 (3-0)
Prerequisite: CivT 241 Mr. Vance
Basic engineering law; owner, engineer, contractor relations and responsibilities; contract performance requirements; competitive bidding procedures; preparation and interpretation of specifications.

CivT 256 Construction Methods and Estimates 6 (5-3)
Prerequisite: CivT 243 Mr. Robinson
Planning and management of construction projects; types of hauling and excavating equipment; proper selection of equip-

ment for job conditions; belt conveyor systems; methods of quarrying, tunneling, pile driving, grouting, and other heavy construction practices; time studies.

CivT 261 Land Surveying 4 (3-3)
Prerequisites: CivT 251, CivT 255 Mr. Vance
Deeds and records; metes and bounds system and U. S. Public Land system of land division; statutes and regulations relating to land division; legal aspects of land surveying.

CivT 262 Elements of Hydraulics and Hydrology 2 (2-0)
Prerequisite: CivT 132 Mr. Vance
A study of the fundamental properties of fluid flow and hydrostatic forces; flow in open channels and pipes; calculation of drainage areas; runoff characteristics; gradients; sewer and culvert size requirements.

CivT 263 Reinforced Concrete 3 (3-0)
Prerequisites: CivT 242, CivT 243, CivT 244 Mr. Robinson
Flexural stresses in plain-concrete and reinforced-concrete beams; bond, and diagonal tension; anchorage, embedment, and anchor bolts; reinforced concrete columns; principles of detailing and drafting of reinforced concrete structures.

CivT 264 Structural Practice 4 (2-6)
Prerequisites: CivT 242, CivT 243, CivT 244 Mr. Robinson
Elementary theory of structures; analysis and design of steel and reinforced structures; preparation of plans and specifications.

CivT 266 Construction Methods and Estimates 6 (5-3)
Prerequisite: CivT 256 Mr. Robinson
Method of constructing wood, steel, and concrete buildings; analysis of plans and specifications for construction requirements; preparation of cost estimates.

DRAWING **Mr. Jenkins**

Draw 111 Engineering Drawing 2 (0-6)
Prerequisite: None Mr. Jenkins
The beginner is taught the use and care of instruments, freehand sketching, geometric constructions, lettering techniques, orthographic and auxiliary projection, basic theory of dimensions and sections.

Draw 121 Engineering Drawing 2 (0-6)
Prerequisites: Draw 111, Math 111 Mr. Jenkins
Continuation of Draw 111 devoted to drafting room practices, threads, gears, fasteners, and working drawings using limit dimensions and including a parts list "exploded view" pictorial.

Draw 131 Descriptive Geometry 1 (0-3)
Prerequisites: Draw 111, Math 121 Mr. Jenkins
Theory of projection drawing and its application in solving practical problems by projection and revolution of points, lines, planes, and solids.

Draw 132 Machine Sketching 1 (0-3)
Prerequisites: Draw 121, Shop 121 Mr. Jenkins
Continuation of Draw 121 with increased emphasis on preparation of a set of working sketches based on interchangeability of parts, and quantity production "operation" or "job" sheets are prepared with consideration given to cost of production.

Draw 133 Electrical Drafting 1 (0-3)
Prerequisites: Draw 111, Phys 121 Mr. Jenkins
The use of standard templates and A.S.A. symbols, in the preparation of wiring diagrams, block diagrams, and schematics

for electronic devices and electrical systems. Inking techniques and lettering templates are emphasized.

ELECTRICAL TECHNOLOGY — Mr. Fuhrer, Mr. Abernathy
ELECTRONICS TECHNOLOGY — Mr. Edwards, Mr. King

ElecT 131 Electric Fields and Circuits 4 (3-3)
Prerequisites: Math 121, Phys 121 Mr. Abernathy
Basic direct current circuit theory with special emphasis on network theorems and their application. Steady magnetic and electric field theory, transients in resistance-inductance circuits and in resistance-capacitance circuits, basic electrical instruments.

ElecT 132 Electrical Machinery 6 (5-3)
Prerequisites: Math 121, Phys 121 Mr. Fuhrer
Characteristics, construction, application and control of direct current generators and motors; survey of the characteristics and construction single-phase and polyphase transformers and motors.

ElecT 241 Alternating-Current Circuits 6 (5-3)
Prerequisites: ElecT 131, Math 131 Mr. Abernathy
Basic physical experiments, elementary A-C circuits, complex algebra, RMS current and average power, analysis of simple circuits by substitution and graphical means, resonance, network equations, coupled circuits and transformers, non-linear elements.

ElecT 243 Elements of Electronics 7 (5-6)
Prerequisites: ElecT 131, Math 131 Mr. King
An introduction into the basic principles of electronics. Principles of radio, vacuum tubes, amplitude modulation detector circuits; tuning circuits, radio frequency amplifier circuits, and audio voltage amplifier circuits.

ElecT 244 Wiring, Codes and Specifications 4 (3-3)
Prerequisites: ElecT 131, ElecT 132 Mr. Fuhrer
Specifications for industrial, commercial, and residential wiring installations including a consideration of the applicable codes, regulations and licenses.

ElecT 245 Applied Mathematics 4 (3-3)
Prerequisites: ElecT 131, Math 131 Mr. Abernathy
Mathematical methods useful in analyzing electronic circuits will be developed. Review of basic differentiation and differentials, integration, partial differentiation, multiple integration, infinite series, elementary differential equations.

ElecT 251 Alternating-Current Circuits 6 (5-3)
Prerequisite: ElecT 241 Mr. Abernathy
Balanced and unbalanced three-phase circuits, two-terminal-pair networks, electric filters, non-sinusoidal waves, transient response, transform methods.

ElecT 252 Alternating-Current Machinery 4 (3-3)
Prerequisites: ElecT 132, ElecT 241 Mr. Fuhrer
Characteristics, construction, operation, and control of power transformers, single-phase motors, polyphase induction and synchronous motors, synchronous generators, and power converters.

ElecT 253 Electronic Circuits 7 (5-6)
Prerequisites: ElecT 132, ElecT 243 Mr. King
A course designed to follow ElecT 243. Power amplifiers, vacuum tube oscillator and power supply circuits complete the study of individual circuit components. Audio units and

high fidelity sound are covered. The FM and AM receiver studied and analyzed in terms of previous studies of individual components.

ElecT 255 Semiconductor Applications 4 (3-3)
Prerequisites: ElecT 243, ElecT 245 Mr. Edwards
Study of semiconductor physics, junction transistors, useful configurations, technical design methods, "h" parameters, graphical and equivalent circuit analysis, coupling, oscillators, transistor communication, applications, and special semiconductor devices.

ElecT 262 Alternating-Current Machinery 4 (3-3)
Prerequisites: ElecT 251, ElecT 252 Mr. Fuhrer
Study of A-C contactors, relays, pilot devices, control wiring diagrams and accelerating methods, construction and design of control apparatus, brakes, rheostats, resistors and variable voltage controllers; control of squirrel cage, wound rotor and synchronous polyphase motors, and single-phase motors.

ElecT 263 Communications 5 (3-6)
Prerequisite: ElecT 253 Mr. King
A continuation of ElecT 253. A study of transmission lines, radio transmitters, and antennas. Such topics as skin effect, characteristic impedance, modulation, radiation, long wave antennas, short wave antennas, and directional antennas are taken up.

ElecT 264 Wiring Methods and Estimates 6 (4-6)
Prerequisites: ElecT 244, ElecT 252 Mr. Fuhrer
Study of light sources, luminaries, illumination levels and interior lighting layouts; roadway lighting and flood-lighting design. Analysis of plans and specifications for the preparation of electrical estimates covering industrial, commercial and residential wiring installations.

ElecT 265 Pulse and Digital Techniques 6 (5-3)
Prerequisites: ElecT 253, ElecT 255 Mr. Edwards
Study of pulse and digital techniques including the application of relaxation oscillators, squaring circuits, differentiators and integrators, limiters, clampers, logic circuits, arithmetic circuits, and other circuits that are associated with the general-purpose, electronic digital computer.

ElecT 266 Power Distribution 3 (3-0)
Prerequisites: ElecT 251, ElecT 252 Mr. Fuhrer
Design of electrical distribution systems for power, light and heat, including switchboards, panels, switchgear and wiring for standard utilization and distribution voltages up to 15 kilovolts. Emphasis is placed on industrial and commercial installations having incoming capacity between 50 to 15000 KVA.

ElecT 267 UHF Techniques 4 (3-3)
Prerequisites: ElecT 253, ElecT 255 Mr. Edwards
Study of transmission line as circuit elements, wave motion, standing waves, use of the Smith Chart to solve matching stub problems, wave propagation, directional antennas, and waveguides.

ElecT 269 Codes and Regulations 2 (2-0)
Co-requisite: ElecT 263 Mr. King
Study of rules and regulations applicable to wire and wireless communications, including FCC Rules and Regulations and the National Electrical Code.

ENGLISH — **Mrs. McArver, Mrs. Sanders**

Engl 111 Composition 5 (5-0)
Prerequisite: None Mrs. Sanders
A study of the essentials of standard usage and basic principles of English grammar with emphasis on vocabulary building and proficiency in writing and speaking clearly, effectively, and appropriately.

Engl 121 Composition 5 (5-0)
Prerequisite: Engl 111 Mrs. McArver
A course presenting a comprehensive treatment of the major principles of effective business communication, and applying these principles to specific types of everyday, practical writing. Continuation of correct English usage.

Engl 242 Technical Reports 2 (2-0)
Prerequisite: Engl 121 Mrs. McArver
A seminar course designed for study and practice in the fundamentals of technical writing. Included for discussion are style, arrangement, format, and mechanics of report writing. Practice in all phases of technical writing.

Engl 243 Public Speaking 2 (2-0)
Prerequisite: Engl 121 Mrs. Sanders
A practical course designed to train technicians in the principles and mechanics of oral composition. Vocabulary study of technical terms and phraseology. Training by participation in formal, extemporaneous, and impromptu speaking as well as in conversation and interviewing. Special emphasis on poise and presentation of material.

INDUSTRIAL TECHNOLOGY — **Mr. Michael, Mr. McAteer**

IndT 251 Motion and Time Study 3 (2-3)
Prerequisite: MechT 241 Mr. McAteer
Principles and techniques in motion and time study; stop watch and predetermined time systems analysis of industrial operations. Laboratory projects involving above principles.

IndT 261 Production and Quality Control 5 (5-0)
Prerequisites: IndT 251, Math 131 Mr. McAteer
Methods of inspecting material produced in a production shop. The planning, scheduling, and dispatching of production in manufacturing operations. Construction of production and its relation to labor, materials, and machines.

IndT 262 Personnel Supervision 2 (2-2)
Prerequisite: None Mr. Michael
Industrial responsibility, authority, and job instruction. Personnel leadership. Subject concerns the supervisor or foreman as it relates to the cost of materials, production, quality, personnel management, and manager of an industrial department.

MATHEMATICS — **Mr. Benolken, Mr. Leong**

Math 111 Algebra and Trigonometry 5 (5-0)
Prerequisite: None Mr. Leong
Review of fundamental algebraic operations; analysis of linear and quadratic functions including the conic sections; basic trigonometric functions, expotential and logarithmic functions; finite series. A concerted effort is made to blend the physical applications and the theoretical principles involved into a homogeneous unit. Slide rule instruction is integrated to coincide with the appropriate lecture materials and physical applications.

Math 121 Algebra and Trigonometry 5 (5-0)
Prerequisite: Math 111 Mr. Benolken
Systems of equations, determinants and Cramer's rule, the complex number system and vector algebra, DeMoivre's theorem and equivalent vector forms. Trigonometric identities and equations, theory of polynomial equations and partial fractions. A rigorous study of infinite series including theorems on limits, indeterminants, the sigma notation; geometric, harmonic, convergent, divergent, alternating and power series. Applications and further slide rule techniques.

Math 131 Analytic Geometry and Calculus 5 (5-0)
Prerequisite: Math 121 Mr. Benolken
A. Differentiation of alegbraic functions by the delta process and the consequent derivation and use of differentiation formulas. Applications in analytic geometry and other physical problems such as the slope function, velocity and acceleration, maxima and minima, approximations and errors by differentials. Differentation of trigonometric, logarithmic and expotential functions.

B. The anti-derivative, integration techniques and use of the table of integrals. Evaluation of the definite integral, fundamental theorem of calculus, plane areas and volumes of revolution as the limit of a sum. Applications to centroids, moments, fluid pressure and work.

MECHANICAL TECHNOLOGY

Mr. Michael

MechT 131 Production Technology 4 (3-3)
Prerequisites: Draw 121, Shop 121 Mr. Michael
A survey of manufacturing processes, machine tools, and inspection devices with regard to their capabilities, capacities, tolerances, finishes, etc. Laboratory involves operation and use of machine tool and measuring devices.

MechT 241 Production Technology 4 (3-3)
Prerequisites: Math 121, MechT 131, Phys 111 Mr. Michael
Process planning of operation sequence for efficient production, tool planning, estimating, laboratory operation of machine tool in production projects.

MechT 242 Engineering Materials 4 (3-3)
Prerequisites: Math 121, Phys 121 Mr. Michael
A study of the most important materials used in engineering work including wood, concrete, steel, etc.

MechT 243 Jig and Fixture Design 4 (2-6)
Prerequisites: CivT 132, Draw 132, MechT 131 Mr. Michael
A study of basic locating and clamping principles and devices, dimensioning, tolerances, etc. Laboratory-design of jigs and fixtures.

MechT 251 Production Technology 4 (3-3)
Prerequisites: MechT 241, MechT 243 Mr. Michael
Basic principles of economics applied to production problems. Economic life of machine tools, jig and fixtures; economic lot size, cost determination, etc. Laboratory-projects in machine shop.

MechT 252 Mechanisms 4 (3-3)
Prerequisites: CivT 132, Draw 131, Math 131 Mr. Michael
A study of the basic theories and techniques in the analysis of relative motion, acceleration and velocities of machine parts such as linkages, cams, gears, and other mechanisms.

MechT 262 Mechanical Design 4 (3-3)
Prerequisites: CivT 242, MechT 242, MechT 252 Mr. Michael

A study of the design of basic machine elements such as shaft, keys, belts, gears, bearings, couplings, and clutches.

MechT 263 Tool and Die Design 4 (2-6)
Prerequisites: CivT 242, MechT 242, MechT 243 Mr. Michael
A practical course in which parts, jigs, fixtures, and dies are designed in actual layout on the drawing board. Emphasis is placed on the fundamental purpose of tool and die design to reduce the cost of the finished commodity, to simplify design, to save materials, and to eliminate unnecessary manufacturing steps.

MechT 264 Industrial Instrumentation 4 (3-3)
Prerequisite: ElecT 258 Mr. Michael
A study of basic principles and instruments for the measurement and control of industrial processes. Laboratory in use and application of electronic, pneumatic, and hydraulic measurement devices to measure temperature, pressure, flow, humidity, etc.

PHYSICS

Mr. Lunsford, Mr. Cline

Phys 111 Mechanics and Heat 6 (5-3)
Co-requisite: Math 111 Mr. Cline
An analytical approach to the principles of mechanics and heat. Subject matter includes measurement, vector and scalar quantities, force and motion, work and energy, statics, elasticity, fluids, thermal behavior of matter, and heat transfer. Emphasis is placed on problem solving and engineering applications. Lectures, problem drill, and laboratory work are coordinated to enable a better understanding of physical principles.

Phys 121 Electricity and Magnetism 6 (5-3)
Prerequisites: Math 111, Phys 111 Mr. Lunsford
A study of electricity and magnetism. Subject matter includes electrostatics, magnetism, basic electric circuits, electromagnetism, magnetic circuits, alternating currents, thermoelectricity and thermionics. Emphasis is placed on problem solving and engineering applications. Laboratory work to parallel work in the classroom.

Phys 131 Sound and Light 3 (2-3)
Prerequisites: Math 121, Phys 121 Mr. Lunsford
An introduction to the principles of sound and light. Subject matter to include wave motion, sound production, sound reception and control, illumination, reflection and refraction, dispersion, lenses, optical instruments, interference and diffraction, and polarization. Laboratory work and problem solving to parallel work in the classroom.

SHOP PRACTICE

Mr. Willis

Shop 111 General Metal Shop 1 (0-3)
Co-requisite: Math 111 Mr. Willis
This course introduces various elementary processes involving metalwork. Such areas as machine work, welding, forging, sheet metal, and heat treatment of metal are included. The use of hand tools, lay-out tools, and measuring instruments is emphasized.

Shop 121 General Metal Shop 1 (0-3)
Prerequisites: Phys 111, Shop 111 Mr. Willis
A continuation of Shop 111 with advanced projects in the general metals field.

FACULTY

Clyde H. Robinson, B.G.E., North Carolina State College; P.E. (North Carolina); Chairman, Technical Division; Civil Technology
John M. Jenkins, Jr., B.S., M.Ed., North Carolina State College; Chairman, Basic Studies Division; Engineering Drawing
Donald R. Abernathy, B.S. Eng. Math., North Carolina State College; Electronics Technology
George H. Benolken, Jr., A.B., Elon College; Mathematics
Henry C. Cline, B.S., M.A., Appalachian State Teachers College; Physics
Richard L. Edwards, A.S., Southern Technical Institute; Electronics Technology
Raymond A. Fuhrer, B.S.E.E., University of Pittsburgh; Electrical Technology
Carl M. King, B.S.E.E., Clemson College; Electronics Technology
Vincent Leong, B.A., High Point College; M.A., Appalachian State Teachers College; Mathematics
Paul C. Lunsford, B.S., Appalachian State Teachers College; Physics
Eleanor M. McArver, B.S., Madison College; English-Librarian
Porter Lee McAteer, B.S.I.E., North Carolina State College; Mechanical and Production Technology
Robert M. Michael, B.M.E., North Carolina State College; Mechanical and Production Technology
Mary Clare Sanders, A.B., Woman's College; English
J. David Vance, B.C.E., North Carolina State College; Civil Technology
Robert Lee Willis, B.S.M.E., North Carolina State College; Mechanical and Production Technology

Pictured left to right as listed inorder above.

REGISTER OF STUDENTS
1961-62 ACADEMIC YEAR

Abernathy, Oliver Alexander	Morganton, N. C.
Abernethy, Robert Franklin	Vale, N. C.
Absher, Troy Lee	McGrady, N. C.
Arrowood, Edwin Lee	Morganton, N. C.
Ballard, Ronald Odra	Gastonia, N. C.
Barda, Andris	Lincolnton, N. C.
Barefoot, Jerry Mac	Smithfield, N. C.
Bassinger, Rolland	Salisbury, N. C.
Bassinger, Ronald	Salisbury, N. C.
Baucom, Martin William	Lowell, N. C.
Beck, Harry Tremont	Winston-Salem, N. C.
Bedsaul, Ray Odell	Winston-Salem, N. C.
Blackwood, Barry Nash	Durham, N. C.
Bogle, Joe David	Belmont, N. C.
Boyd, Tommy Lewis	Kings Mountain, N. C.
Braddy, James Jennings	Washington, N. C.
Bradley, Richard Floyd	Gastonia, N. C.
Breedlove, Reginald Kimmie	Gastonia, N. C.
Brittain, Lawrence Lingle	Hickory, N. C.
Brooks, Arthur Dean	Grassy Creek, N. C.
Brooks, Harvey Francis	Winston-Salem, N. C.
Brothers, Stanley James	Winston-Salem, N. C.
Buchanan, Phillip Eli, Jr.	Spruce Pine, N. C.
Bunce, Jimmy	Fayetteville, N. C.
Burris, Jerry Zeb	Lincolnton, N. C.
Burris, Silas Steve	Lincolnton, N. C.
Butler, William Robert	Wilmington, N. C.
Cade, George Turner	Fayetteville, N. C.
Campbell, William Allen	Salisbury, N. C.
Cannon, John Douglas	Morganton, N. C.
Carlton, John Tate	Pinehurst, N. C.
Carver, Glenn Thurman	Robbinsville, N. C.
Cavenaugh, Arthur Preston, Jr.	Wallace, N. C.
Childers, Farrell Dane	Hickory, N. C.
Clark, William Henderson	Bessemer City, N. C.
Clement, Joseph Douglas	Anderson, S. C.
Cloninger, Ronald Gilbert	Gastonia, N. C.
Coble, Benjamin Henry	Pleasant Garden, N. C.
Couch, Donald Hughes	Elkin, N. C.
Cox, Maurice Griffin	Coleridge, N. C.
Crabtree, Clyde Franklin	Pittsboro, N. C.
Crater, William Franklin, Jr.	Winston-Salem, N. C.
Craven, Larry Francis	Winston-Salem, N. C.
Crawford, Richard Neel	Gastonia, N. C.
Credle, Walter Gray	Englehard, N. C.
Crews, David Samuel	Winston-Salem, N. C.
Crosby, Douglas Thomas	Fairforest, S. C.
Crosby, David Wayne	Barnwell, S. C.
Cruise, Charles Wiley	Mt. Airy, N. C.
Dalton, William Herman	Gastonia, N. C.
Daniel, Alvin Williams	Gastonia, N. C.
Davis, Edgar Carroll, Sr.	Kannapolis, N. C.
Dawkins, John Rayford	Gastonia, N. C.
Dedmon, Ronnie Jetton	Lincolnton, N. C.
DeHart, Ralph Larry	Bryson City, N. C.
Deviney, Larry Grant	Spindale, N. C.
Dinkins, Gerald Nash	Clemmons, N. C.
Dorsett, Thomas Howard	Yadkinville, N. C.

Earnhardt, Jimmie Darrell	Albemarle, N. C.
Elliott, Barry Ray	New London, N. C.
Elliott, William Stokely, Jr.	Edenton, N. C.
Euliss, Howard Odell	Mayodan, N. C.
Falls, Marvin Richard	Clover, S. C.
Finger, Boyce Lee	Avondale, N. C.
Floyd, Frank Lattie	Raleigh, N. C.
Fogle, Jerry Woodrow	Dallas, N. C.
Fountain, Woodrow Terry	Rutherfordton, N. C.
Fox, Dale Monroe	Statesville, N. C.
Freeman, Larry Eugene	Fayetteville, N. C.
Fulton, William Lee	Salisbury, N. C.
Gabriel, Gerald Bryan	Sherrill's Ford, N. C.
Garner, James Monroe	Robbins, N. C.
Gilbert, Paul L.	Statesville, N. C.
Gobble, Arnold Odell	Columbia, S. C.
Goforth, Willie Ralph	Shelby, N. C.
Gray, James William, Jr.	Enfield, N. C.
Gray, William O'Daniel, Jr.	Gastonia, N. C.
Grayson, John Robert, Jr.	Rutherfordton, N. C.
Griffin, William Thomas	Gastonia, N. C.
Guffee, James Allen	Belmont, N. C.
Hale, William Robert	Greensboro, N. C.
Hall, Jerry Dade	Burlington, N. C.
Hamrick, Roger Heyward	Fallston, N. C.
Hardin, Eddie Jennings, Jr.	Rutherfordton, N. C.
Harmon, James Edward	Cliffside, N. C.
Heavner, Robert Lee	Gastonia, N. C.
Helms, Robert Claymon	Marshville, N. C.
Henderson, Claude Bryan	Maysville, N. C.
Hennawy, Mohamed M. El.	Tanta, Egypt
Herter, William Frederick	Maiden, N. C.
Heustess, James Ellis	Clarkton, N. C.
Hill, Thomas Earl	Gastonia, N. C.
Hobgood, Milton Norman	Oxford, N. C.
Hough, Joseph Alvin	Greensboro, N. C.
Howard, Billy Jackson	Durham, N. C.
Hubbard, David Lee	Belmont, N. C.
Hubbard, Thurman James, Jr.	Winston-Salem, N. C.
Hullett, David Franklin	Gastonia, N. C.
Huss, Oscar Lee, Jr.	Lincolnton, N. C.
Irwin, Joe Thomas	Sparta, N. C.
Isenhour, Jerry Lee	Kannapolis, N. C.
Isley, Joel Marshall	Siler City, N. C.
Jenkins, Melvin Clarence, Jr.	Gastonia, N. C.
Jenkins, Robert Bain, Jr.	Gastonia, N. C.
Johnson, Carlton Earl	Asheboro, N. C.
Johnson, Larry Eugene	Durham, N. C.
Jones, Donald Wayne	Greensboro, N. C.
Jones, Hiram Allen	Laurinburg, N. C.
Jordan, Tommy Haywood	Winston-Salem, N. C.
Kafitz, Warren Lee	Gastonia, N. C.
Keever, James Alfred	Lincolnton, N. C.
Kennedy, Jack Holden	Shelby, N. C.
Keyser, Teddy Howard	Greensboro, N. C.
Kidd, Roby Garland, Jr.	Bennett, N. C.
King, Ray James	York, S. C.
Kirkman, Fred Alex	Kernersville, N. C.
Koonts, Webster Bayne	Lexington, N. C.
Lamson, John Ferguson, II	Statesville, N. C.
Lineback, James Edwin	Winston-Salem, N. C.
Lineberger, Larry White	Dallas, N. C.

Link, Cecil Guy	Statesville, N. C.
Little, Arey Clifford	Marshville, N. C.
Long, George Barry	Winston-Salem, N. C.
Long, Larry Leroy	Lincolnton, N. C.
Long, John William, III	Mocksville, N. C.
Long, Steven Ray	Cramerton, N. C.
Lowder, Calvin Lentz	Albemarle, N. C.
Lytle, Cecil Ray	Old Fort, N. C.
Marley, Harold Dean	Wilkesboro, N. C.
Mauldin, Sanford Lee	Old Fort. N. C.
McClannon, Michael Wayne	Kannapolis, N. C.
McCorkle, Gene Edward	China Grove, N. C.
McDaniel, William Carson	Asheville, N. C.
McDonald, James Wilson	Gastonia, N. C.
McLurd, James William, Jr.	Crouse, N. C.
McNeill, Clayton Donnell	Broadway, N. C.
Miller, Hilton Lonnie	Salisbury, N. C.
Mims, Robert Douglas	Raleigh, N. C.
Mitchell, Bays Cockerham	Sparta, N. C.
Moore, Curtis Eugene	Hurdle Mills, N. C.
Moore, Dewey Max	Peachland, N. C.
Moretz, William Paul	Bessemer City, N. C.
Nicholas, James Vincent	Valley Stream, N. Y.
Norman, Roy Harold, Jr.	Lincolnton, N. C.
Oliver, Verlin Kenneth	Jonesville, N. C.
Ostwalt, Hal Clark, Jr.	Statesville, N. C.
Ottinger, Nathan Lee	Stanley, N. C.
Owen, Carl Lee	Winston-Salem, N. C.
Palmer, Charlie Horace	Lyons, Georgia
Patrick, Walter Maurice	Grifton, N. C.
Pettus, Willie Chappell, Jr.	Keysville, Va.
Pollock, James Paul	Goldsboro, N. C.
Pyles, Paul David	Mt. Airy, N. C.
Ray, Larry Walter	Spring Lake, N. C.
Reece, Davis Don	Boonville, N. C.
Reitzel, Paul Leon	Siler City, N. C.
Rhodes, Clarence McDevitt, Jr.	Winston-Salem, N. C.
Richardson, Charles E.	Iron Station, N. C.
Ridley, Doyle Alvin	Sylvia, N. C.
Roberts, Thomas Jordan	China Grove, N. C.
Robinson, Arnold Douglas	Gastonia, N. C.
Robinson, James Benjamin	Gastonia, N. C.
Rogers, Billy Lee	Elkin, N. C.
Rogers, Jerry Allen	Greensboro, N. C.
Roper, Harold Edward	Morganton, N. C.
Rountree, Gramrie Earl	Sunbury, N. C.
Royster, Wallace Reginald	North Wilkesboro, N. C.
Rumple, Charles Dennis	Statesville, N.C .
Russell, Jerry Bryan	Winston-Salem, N. C.
Russell, William Joseph	Staunton, Va.
Seagle, Jerry Lynn	Gastonia, N. C.
Schibor, John Thomas	Gastonia, N. C.
Shaver, Michael Sheldon	Salisbury, N. C.
Sherrill, Elliotte Wilson	Sherrill's Ford, N. C.
Shore, Larry Hall	Greensboro, N. C.
Shore, Steve Allen	Boonville, N. C.
Shuler, John Robert	Gastonia, N. C.
Shumate, James Richard	North Wilkesboro, N. C.
Sigmon, Powell Floyd	Hudson, N. C.
Simpson, Charles Everett	Cullowhee, N. C.
Slocumb, William Henry, Jr.	Dunn, N. C.

Smith, Richard Douglas	Gastonia, N. C.
Smith, Terrell Ray	Belmont, N. C.
Spooner, Eugene Earl	Charlotte, N. C.
Sprinkle, John Phillip	Winston-Salem, N. C.
Stanley, Paul Randal	Gastonia, N. C.
Stansell, Jas Wylie	Morganton, N. C.
Steele, John Stephen	Wilkesboro, N. C.
Stewart, Jerry Lee	Balfour, N. C.
Stone, Ted Garland	Willow Springs, N. C.
Stowe, Donald Dee	Belmont, N. C.
Summers, George Clayton, Jr.	Cameron, S. C.
Surles, Jimmy Aswell	Bunn, N. C.
Sutton, Maurice Mac	Bryson City, N. C.
Swicegood, Jackie McCoy	Lexington, N. C.
Tarleton, James David	Spencer, N. C.
Tarleton, Thomas Edwin	Spencer, N. C.
Tate, Richard Calvin	Winston-Salem, N. C.
Tatlock, Robert, Jr.	Gastonia, N. C.
Taylor, Allen Wise, Jr.	Altavista, Va.
Taylor, Donald Ray	Oak Ridge, Tenn.
Taylor, Walter Gray	Lewisville, N. C.
Templeton, James Dwight	Winston-Salem, N. C.
Thomas, Don Davis	Bessemer City, N. C.
Thomas, William Covington	Rockingham, N. C.
Thrower, Arthur Jesse	Rockingham, N. C.
Tickle, Lacy Quint	Gibsonville, N. C.
Timmons, Paul Russell	Mt. Airy, N. C.
Todd, Kenneth Francis	Gastonia, N. C.
Trexler, William Wayne	Salisbury, N. C.
Turbyfill, Donald Ray	Greensboro, N. C.
Turlington, Waitus Dennis, Jr.	Gastonia, N. C.
Van Meter, Walter Wallace	Wilkesboro, N. C.
Vernon, Ronald Gene	Winston-Salem, N. C.
Vines, Peter Liles	Asheville, N. C.
Waddell, Larry Scott	Raleigh, N. C.
Wagoner, John Wayne	Gibsonville, N. C.
Walker, Samuel Eugene	Burlington, N. C.
Walker, Webster Russell	Aurora, N. C.
Waller, Linn	Salisbury, N. .C
Ward, Roy Jethro, Jr.	Gastonia, N. C.
Warren, Samson, Jr.	Newton Grove, N. C.
Watts, McCoy C.	Ranlo, N. C.
Waynick, Herbert Wilson	Greensboro, N. C.
Wentz, John Ritch, III	Morven, N. C.
Wiggins, Wayne Conley	Franklin, N. C.
Wilhelm, Vaughn Sanford	Salisbury, N. C.
Wilkinson, Don Ross	Winston-Salem, N. C.
Wilkinson, Teddy Adrian	Wadesboro, N. C.
Williams, Charles Eugene	West End, N. C.
Williams, Gregory Dimmette	Robbins, N. C.
Willie, Lee Andrew	Raleigh, N. C.
Willis, William Arthur	Old Fort, N. C.
Wilson, Arlin Edwards	Kings Mountain, N. C.
Wilson, Robert Moore	Gastonia, N. C.
Winfrey, James Richard	Winston-Salem, N. C.
Witherspoon, Oscar Coyte, Jr.	Catawba, N. C.
Womble, Samuel Richard	Chapel Hill, N. C.
Wood, Daniel Richard	Winson-Salem, N. C.
Wright, Douglas Richard	Morganton, N. C.
Yates, Roger Wade	Gastonia, N. C.
Young, Thomas Jefferson, Jr.	Leland, N. C.
Yow, Harvey Leon	Seagrove, N. C.

GASTON TECHNICAL INSTITUTE

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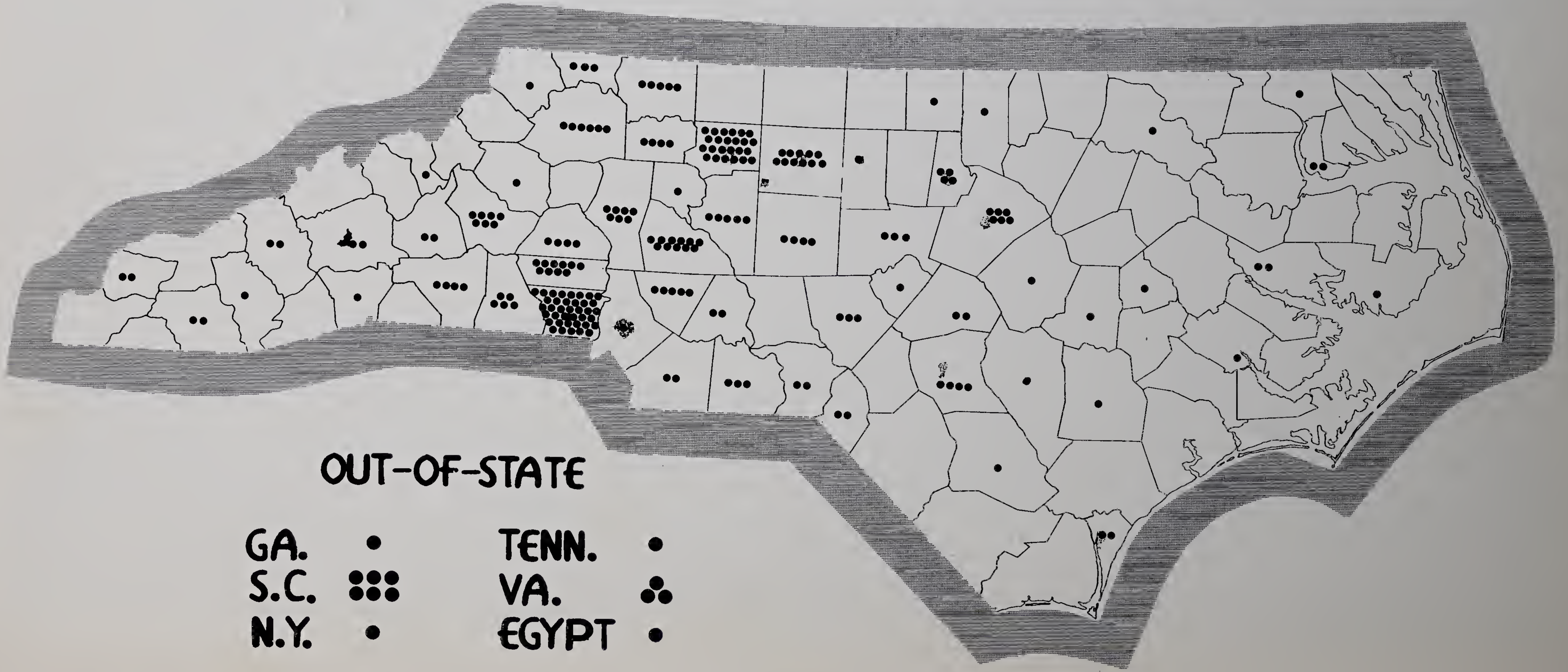


REGISTER OF GRADUATES

Abernethy, William Parks—ELT 61	Salisbury, N. C.
Allen, Sidney Herman—CT 60	Durham, N. C.
Ammons, Hardee, Jr.—ELT 59	Asheville, N. C.
Anderson, Hugh Howard—MPT 61	Aberdeen, N. C.
Andrew, Donald Keith—ELT 60	Snow Camp, N. C.
Austin, Harvey Paul—ELT 60	Aurora, N. C.
Banning, Jack Allen—MPT 59	Edneyville, N. C.
Barringer, Jerry Monroe—ELT 59	Albemarle, N. C.
Bass, James Kindred—ELT 61	Tarawa Terrace, N. C.
Bass, William Fred—ELT 60	Louisburg, N. C.
Bell, Tony Haldon—ELT 60	Jonesville, N. C.
Best, William Howard, Jr.—ELT 60	Henderson, N. C.
Billings, Alfred Lawrence—MPT 61	Elkin, N. C.
Blakely, Raymond Pittman—MPT 59	Sanford, N. C.
Bottomley, Gary James—CT 60	North Wilkesboro. N. C.
Bowers, William Rex—ELT 59	Wadesboro, N. C.
Britt, Charles Lester—CT 61	Carthage, N. C.
Brooks, John Thomas—ELT 59	Tuckerdale, N. C.
Buchanan, George David—ELT 61	Franklin, N. C.
Burns, Charles Laxton—ELT 61	Ellenboro, N. C.
Canup, Teddy Brooks—MPT 61	Kannapolis, N. C.
Carter, Arthur Dean—ELT 60	Husk, N. C.
Cheek, Virgil Keith—ELT 60	Asheboro, N. C.
Childres, Ronny Albert—CT 60	Drexel, N. C.
Clapp, William Ivy—ELT 60	Randleman, N. C.
Clark, David Crockett, Jr.—ELT 59	Roanoke Rapids, N. C.
Cline, Jesse Donald—ELT 59	Statesville, N. C.
Clodfelter, Wayne Elwood—MPT 61	Lexington, N. C.
Coburn, Richard Ray—ELT 59	Roanoke Rapids, N. C.
Cook, Dwight McKinley—ET 60	Pilot Mountain, N. C.
Cox, James Allen—ELT 60	Kannapolis, N. C.
Creech, Billy Ray—ELT 60	Benson, N. C.
Cromwell, Thomas Rodney—ELT 60	Bryson City, N. C.
Crowell, Harris Adam—CT 60	Greensboro, N. C.
Cumby, Thomas Jackson—CT 59	Trinity, N. C.
Cunningham, Charles Emory—CT 61	Charlotte, N. C.
Dalton, Ralph Leonard—ELT 61	Gastonia, N. C.
Davis, Carlisle Berry—ELT 61	St. Pauls, N. C.
Davis, Jon Harold—CT 61	Gastonia, N. C.
Earnhardt, Robert Spencer—MPT 60	Spencer, N. C.
Elledge, Vaught Herbert—ELT 60	North Wilkesboro, N. C.
Ellis, George Willis—ELT 61	Winston-Salem, N. C.
Felton, James Stanfield—ELT 59	Fayetteville, N. C.
Fishel, Lloyd Van—MPT 60	Winston-Salem, N. C.
Floyd, Willie Leon, Jr.—MPT 59	Rose Hill, N. C.
Freeman, John Paul—ELT 60	Edneyville, N. C.
Freeman, Fucius Joseph—ELT 59	Henderson, N. C.
Frick, Thomas Murrell—CT 61	Raleigh, N. C.
Gaddy, Delma Ray—ELT 59	High Point, N. C.
Gaddy, Thomas Wade—ELT 60	High Point, N. C.
Galloway, Cleveland Roscoe—ELT 60	Gastonia, N. C.
Gentry, Jack Austin—ELT 61	Elkin, N. C.

Gibbs, Aubrey Wayne—CT 61	Swan Quarter, N. C.
Gilgo, Horace Paul—MPT 59	Oriental, N. C.
Goodwin, Thomas Martin, II—ELT 61	Raleigh, N. C.
Gowens, Donald George—ELT 60	Spartanburg, S. C.
Graham, Bobby Eagle—ELT 61	Salisbury, N. C.
Graham, Eubert Hugh, Jr.—ELT 60	Salisbury, N. C.
Grainger, William Graham—ELT 59	Raleigh, N. C.
Graves, Edward Lipscomb—ELT 60	Greensboro, N. C.
Gray William O'Daniel, Jr.—ET 61	Gastonia, N. C.
Griffin, Frank Michael—ELT 60	Columbia, N. C.
Griffin, Max Vernon—ELT 59	Dunn, N. C.
Grigg, Max Ellis—ELT 59	Gastonia, N. C.
Hager, Fred Jerald—CT 60	Cleveland, N. C.
Hall, Kenneth Linwood, Sr.—MPT 59	Asheboro, N. C.
Hamrick, Donald Lee—ELT 61	Gastonia, N. C.
Hardee, Charles Arnold—ELT 60	Laurinburg, N. C.
Hardin, Carroll—ELT 60	Gastonia, N. C.
Hardin, James Jackson—ELT 61	Morganton, N. C.
Harless, Max Rowland—ELT 60	Lenior, N. C.
Harris, James Errol—ELT 61	Elkin, N. C.
Hayes, Billy Elmore—ELT 59	Mt. Holly, N. C.
Hefner, William Daris—CT 61	Hickory, N. C.
Henderson, Maurice Edward—ELT 61	Raleigh, N. C.
Hobgood, Roger Brent—ET 60	Fort Bragg, N. C.
Hodge, William Worth—ELT 60	Raleigh, N. C.
Holbrook, Roger Graham—ELT 61	Greensboro, N. C.
Holt, Oscar Alton—ELT 61	New Hill, N. C.
Honeycutt, Donald Lee—CT 60	Kannapolis, N. C.
Hoover, Frank Weldon—ET 60	Salisbury, N. C.
Hopkins, Robert Jordan—ELT 59	Gastonia, N. C.
Hurlocker, Claude Melvin—ELT 60	Mt. Pleasant, N. C.
Ingle, Edwin Coy—ELT 61	Burlington, N. C.
Isom, Billy Bascom—CT 60	Angier, N. C.
Johnson, Walter Willis—CT 60	Aurora, N. C.
Jones, Charles Roger—ELT 61	Raleigh, N. C.
Justice, Fred Wilson—ELT 61	Lincolnton, N. C.
Kesler, David Worth—ELT 61	Salisbury, N. C.
Kilpatrick, Glenn Ray—ELT 59	Hendersonville, N. C.
King, Linwood Robins, Jr.—ELT 61	Turkey, N. C.
Kluttz, Herbert Lee—MPT 59	Albemarle, N. C.
Koontz, Kerney Lee, Jr.—ELT 61	Lexington, N. C.
Kurfees, John Roger—CT 60	Statesville, N. C.
Lawrence, Jesse Macon, Jr.—ET 60	Mt. Ranier, Maryland
Linville, Larry Burton—ET 60	Belews Creek, N. C.
Lucas, Jerry Edward—ELT 61	Albemarle, N. C.
Lytle, Joseph Duane—ELT 61	Lexington, N. C.
Martin, James Ramey—ET 61	Gibsonville, N. C.
McCain, William Jennings—MPT 61	Candler, N. C.
McGilvary, James Dewitt—ELT 61	Sanford, N. C.
McRae, James Stimpson—ET 61	Mt. Gilead, N. C.
Morgan, Clyde Hanes, Jr.—MPT 61	Sanford, N. C.
Nolen, Frank William—ET 60	Franklin, N. C.
Nowell, James Allen—ELT 60	Eagle Rock, N. C.
O'Briant James Leonard, Jr.—ELT 59	Durham, N. C.

Padgett, Julian Edward—ET 60	Union Mill, N. C.
Page, George Cooper—ELT 60	Wilson, N. C.
Pearson, William Lee—CT 61	N. Charleston, S. C.
Pitts, Joe Roscoe—ELT 59	Burlington, N. C.
Poteet, Thomas Sanford—MPT 60	Drexel, N. C.
Proffitt, Daniel Stuart—MPT 60	N. Wilkesboro, N. C.
Purser, William Norris—ELT 60	Matthews, N. C.
Rabb, Nelson Eddy—MPT 61	Gastonia, N. C.
Reap, Jerry Phillip—ET 60	Albemarle, N. C.
Ritchie, James Lewis—MPT 59	Draper, N. C.
Rosebro, Robert Neilson, Jr.—ELT 60	Gastonia, N. C.
Ross, Donald Eugene—ELT 61	Norwood, N. C.
Sanders, John Huey, Jr.—MPT 61	Belmont, N. C.
Shackleford, Robert Steele—ET 61	Greenville, N. C.
Shehane, Harold Lawrence—ELT 61	Gastonia, N. C.
Silver, Charles Ellis—ELT 60	Burnsville, N. C.
Smith, Aaron Earl—CT 60	New Hill, N. C.
Smith, Glenn Oliver—MPT 61	Rockingham, N. C.
Smith, Jim Donald—ET 59	Lincolnton, N. C.
Smith, Thomas William—CT 59	Raleigh, N. C.
Southern, Ambrose Grier—ET 60	Mt. Airy, N. C.
Stafford, Ivy Kenyon, Jr.—ELT 60	Buie's Creek, N. C.
Stewart, Marx Dunbar—ELT 61	Raleigh, N. C.
Stewart, Troy Ledale—ET 61	Gibsonville, N. C.
Stewart, William Allen—ELT 61	Smithfield, N. C.
Sutton, Alexander Candlus, II—CT 59	Hertford, N. C.
Sutton, William Thomas—ET 60	Kinston, N. C.
Swaim, Jesse Edward, Jr.—MPT 59	Winston-Salem, N. C.
Taylor, Roger Connie—ELT 60	Mayodan, N. C.
Tesh, John Robert—ET 59	Lexington, N. C.
Testerman, Charles Edward—ELT 61	Grassy Creek, N. C.
Triplett, James Ray—CT 61	North Wilkesboro, N. C.
Truckner, Alton Haynes—ELT 59	Durham, N. C.
Tucker, Gerald D.—CT 59	Locust, N. C.
Waddell, Bill Dale—ELT 60	Grassy Creek, N. C.
Waddell, John Delano—ET 60	Grassy Creek, N. C.
Wagner, Carroll Monroe—ELT 59	Hendersonville, N. C.
Wallace, James Madison, Jr.—ET 59	Fayetteville, N. C.
Ward, Kenneth Ray—ELT 59	Archdale, N. C.
Washam, James Claude—CT 59	Kannapolis, N. C.
West, Clarence Kenneth—CT 60	Apex, N. C.
Whisnant, Frank Eagle—MPT 60	Salisbury, N. C.
Whisnant, James Lamar—MPT 61	Gastonia, N. C.
White, Daniel Phillip—ELT 60	Greensboro, N. C.
Wilder, Barna Osborne—ELT 61	Zebulon, N. C.
Willis, Ronald Lee—CT 61	Spray, N. C.
Williams, Darrell Ellis—ET 60	Arlington, Va.
Williams, James Wayne—ELT 59	Swan Quarter, N. C.
Williamson, Jacob Adolph—CT 60	Washington, N. C.
Wright, Ralph Lane—ELT 59	Fallston, N. C.
Yelvington, John Eustace, Jr.—ELT 61	Clayton, N. C.

HELPFUL HINTS

TO REACH THE GASTON TECHNICAL INSTITUTE, 20 miles west of Charlotte, N. C.

BY AUTOMOBILE:
From south, by route 321 or 29. Come to U.S. 29 & 74 and travel west seven blocks from Chester Street.
From north and east, by route 29 and 74, drive ten blocks from center of Gastonia (National Bank of Commerce)
From west, by route 29 and 74, drive to fourth stoplight on Franklin Avenue.

BY BUS OR TRAIN: Taxi to Gaston Tech (about ten blocks west on Franklin Avenue).

BY PLANE: Commercial planes land at Douglas Municipal Airport: limousine to Highway 29; Trailways or Greyhound to Gastonia (hourly service).

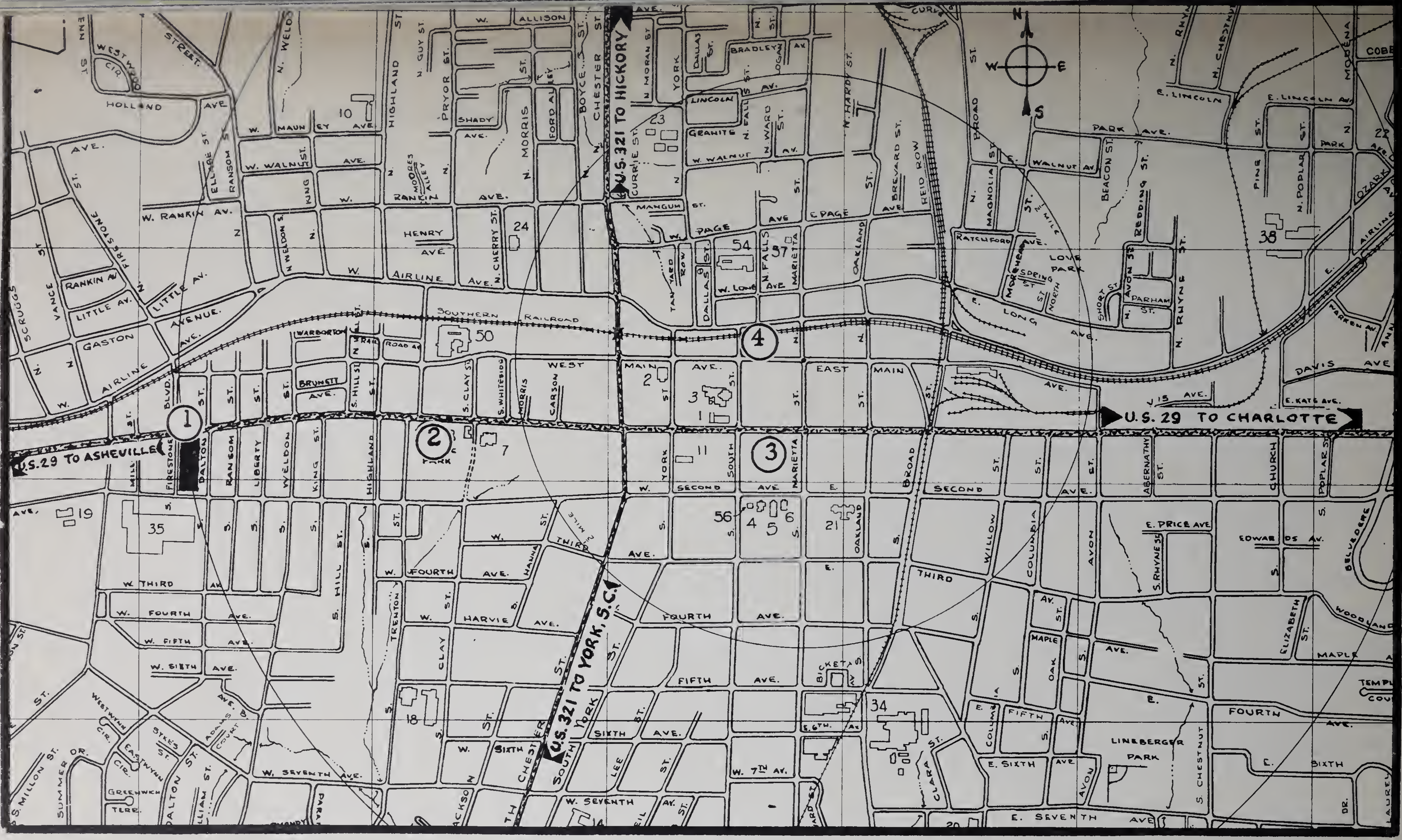
SCHOOL CLOTHING: Students generally dress informally, although most of them need a suit on occasion. Many choose slacks, sport shirts, warm jackets or sports coats. Each student, regardless of what he chooses to wear, needs additional clothing suitable for shop and labs. For social events, the usual custom here is for dark suit, dress shirt and tie.

STUDENT AUTOMOBILES: Gaston Technical Institute students are permitted to keep cars on campus as long as they operate them safely, courteously, and moderately. Parking space is at a minimum, and students are advised to "pool" wherever possible.

WHAT TO BRING: Since Gaston Tech has no dormitory facilities, bedding, towels, etc. are arranged for with the individual landlord who decides whether or not such items will be required Only clothing and any personal items the student desires are necessary. Many students bring radios, cameras, etc., which they enjoy during leisure time.

LAUNDRY SERVICE: No laundry facilities are available at Gaston Tech. However, there are numerous self-laundry facilities placed at strategic points over the city. Two drycleaning establishments are near the school and both pick-up and delivery service is available from commercial laundries and drycleaners.

DRAFT DEFERMENT: Gaston Tech in-state students are subject for deferment through the North Carolina Selective Service System Regulations I-S (C), Section 1622.15, for the first year; and II-A, Section 1622.22, for the second year. Out-of-state students will have to clear these regulations through their Local Boards.



Points of Interest

1. Gaston Technical Institute
2. Y. M. C. A.

Gastonia, North Carolina

3. Bus Station
4. R. R. Station

GASTON TECHNICAL INSTITUTE • GASTONIA, N. C.

1962-63